2026 Chevrolet Low Cab Forward

Chevrolet LCF Medium Duty Body Builder Manuals are now available - go to www.gmupfitter.com

Download the Body Builder Manual or sections for important information about up fitting your Chevrolet LCF Medium Duty Commercial truck. Please check Section 0 to review information that has changed since your last visit as the guide is updated from time to time to include the latest information available. All printed material, specifications, and drawings contained in the Chevrolet LCF Medium Duty Body Builder Manua are based on the latest information available at the time of publication / posting. The manufacturer reserves the right to discontinue or change, at any time, without notice specifications, options, materials, equipment, design and models.

Information contained in the guide includes:

- FMVSS safety standard
- EPA requirements
- OE recommendations
- Cautions for successful application up fitting and Frame modification procedures
- Last updated on 7-OCT-2024

2026 Body Builder Guide Revisions

Revision Number	Date	Section	Page(s)	Description

Introduction

This guide has been provided as an aid to final stage manufacturers in determining conformity to the applicable Emission Control and Federal Motor Vehicle Safety Standards. Final stage manufacturers should maintain current knowledge of all Emission Regulations and Federal Motor Vehicle Safety Standards and be aware of their specific responsibility in regards to each standard.

Any manufacturer making material alterations to this incomplete vehicle during the process of manufacturing the complete vehicle should be constantly alert to all effects, direct or indirect, on other components, assemblies or systems caused by such alterations. No alterations should be made to the incomplete vehicle that directly or indirectly results in any either component, assembly or system being in nonconformance with applicable Emission Regulations or Federal Motor Vehicle Safety Standards.

General Motors will honor its warranty commitment (for the cab-chassis only), to the ultimate consumer, provided:

1. The final stage manufacturer has not made any alterations or modifications which do not conform to any applicable laws, regulations or standards, or adversely affect the operation of the cab-chassis; and
2. The final stage manufacturer complied with the instructions contained in this guide with respect to the completion of the vehicle. Otherwise, the warranty becomes the responsibility of the final stage manufacturer.

The final stage manufacturer is solely responsible for the final certification of the vehicle and for compliance with Emission Control and Federal Motor Vehicle Safety Standards. The information contained in this guide has been provided for the final stage manufacturer’s information and guidance.

This guide contains information pertaining to the:

- 3500 HG & 4500 HG Gas Chassis Cab
- 3500 HG & 4500 HG Gas Crew Cab
- 5500 HG & 5500 XG Gas Chassis Cab
- 5500 HG & 5500 XG Gas Crew Cab
- 4500 HG, 4500 XD & 5500 Diesel Chassis Cab
- 4500 HG, 4500 XD & 5500 Diesel Crew Cab
- 6500 XD & 7500 XD Diesel Chassis Cab

CAUTIONARY NOTES:

Electrical Sensitivity and Battery Relocation Warning

Starting with the 2011 Model year Diesel and 2012 Model year Gas LCF, these products are more sensitive to poor electrical integrity of the starting circuit when compared to previous year models. This is due to the ever increasing electrical demands from the base vehicle that includes the new emissions componentry as well as more sophisticated engines and transmissions. The control modules for these devices require healthy electrical circuits without significant voltage drops through the supply and return circuits.

A relocation or modification of batteries coupled with insufficient wire gauge, poor terminal crimps, weak conductivity to frame rails , terminal corrosion, or loose bolts, could contribute to a possible no start condition.

All Fluids and Lubricants Caution

Any fluids or lubricants added to the chassis during the final manufacturing process must meet Chevrolet's fluids and lubricants specifications. These fluids and lubricant specifications vary based on model year and chassis model code. A recommended fluids list based on model and model year can be found in the Vehicle Owner’s Manual or online at www.gmupfitter.com

Low Speed Applications for LCF Chassis

Any low speed vehicle applications using the Alison Transmission such as sweeper, highway striping and road side mowing airport service must adhere to the following guidelines in order to prevent the over heating of the automatic transmission fluid.

Factory Recommendation: Select Range 1 for low speed operations under 11 mph, (18km/h).
Select Range 2 for low speed operation under 22 mph, (36km/h).

Auxiliary Transmission Cooler Warning

Installation of Auxiliary automatic transmission fluid cooler will void warranty on transmission/engine.

Transmission Temperature Warning Lamp

Automatic transmission fluid temperature warning lamp illuminates over 140°Centigrade/284°Fahrenheit.

Tapping into Engine Cooling System

Do not connect any auxiliary heating or cooling devices to the chassis cooling system. Engine calibrations are based on the original cooling system and any changes may adversely affect performance or diagnostics. The chassis cooling system is part of the vehicle emission system and is also used to thaw DEF fluid in diesel trucks and meet mandatory emission thaw times.

Air Conditioning Modification

No modifications or alterations should be made to the factory provided air conditioning system.

Engine Front End Accessory Drive (FEAD) Modification

Modifying or installing additional equipment onto the engine accessory drive can impact engine performance and emissions regulations compliance. If modifications are made to the FEAD, impact to certification compliance and subsequent actions are solely the responsibility of those making the modifications.

CAUTIONARY NOTES CONTINUED:

Brake Override Logic

The ECM logic has been revised to adopted Brake Override Logic that will reduce engine RPM to idle RPM when the brake and accelerator pedals are applied simultaneously. This ECM logic has been adopted to enhance the safe operation of the vehicle. The brake override logic disables the accelerator pedal input and protects against vehicle malfunction in cases where the accelerator pedal and brake pedal are operated simultaneously, or if unintended driver acceleration pedal operations are detected.

No–Start Condition: Clicking or Banging from Starter
MY2012-2015 Chevrolet LCF Equipped with 5.2L (4HK1) Diesel Engines

It is possible to experience a no-start condition accompanied by a clicking or banging-type noise from the starter. This condition presents itself when vehicle battery voltage is low. The insufficient voltage/current will cause an improper ground for the X-17 starter relay. As a result, the starter will not remain engaged to start the engine. This is not an indication of a defective starter, alternator or ECM.

The following is a list of common causes for low battery voltage. Inspect these items as possible causes for the described condition before further diagnosis.

1. Extreme low ambient temperatures (below 10°C / 50°F). The chemical reactions inside of batteries take place more slowly when the battery is cold. The vehicle systems therefore have less energy to work with when it tries to start the engine.
2. Vehicles stored for long periods without proper battery charging and maintenance.
3. Batteries that have been relocated further away from the starter than the original designed location.
4. Batteries or battery cables that have been replaced with improper gauge.
5. Corroded battery terminals and cables.
6. Vehicles that are started and stopped multiple times without allowing the charging system to replenish the batteries’ charge.
7. Excessive use of electrical equipment such as electric lift gates.
8. Interior and exterior lighting left “On” without the engine running.

NOTE: Do not diagnose starters, alternators, ECM's or other no-start conditions prior to ensuring the battery is fully charged and none of the above common causes exist

Fuel Tank Caution

Fuel fill kit must be installed on cab chassis if it will be driven for an extended distance. Note: fuel tank kit provides venting for the fuel tank.

CAUTION: DO NOT RESTRICT OR KINK THE FUEL TANK VENT HOSE. Operating this vehicle with a restricted or kinked fuel tank vent hose may cause serious damage to the fuel tank and/or fuel injection pump. Continued operation may cause engine failure.

Anti-lock Brake System (ABS) & Electronic Stability Control (ESC)

ABS helps prevent the wheels from locking or from slipping when the brakes are applied under certain driving conditions.

ESC monitors the truck’s steering wheel angle, individual wheel rotation speed, lateral G forces and more. When the system senses that the driver is at risk of losing stability, it alerts the driver via an on-dash warning light and automatically reduces engine output and applies braking pressure to help the driver maintain stability.

ABS and ESC systems are sensitive to chassis modifications. Please reference Section 2 – “Installation of Body and Special Equipment” prior to making modifications to the chassis.

CHEVROLET LCF MEDIUM DUTY V.I.N. IDENTIFICATION

JAL	E	5	J	1	2	0	H	7	9	00750

1-3

CODE	MANUFACTURER / ASSEMBLER
JAL	ISUZU MOTORS LTD., JAPAN
54D	THE SHYFT GROUP Inc., USA

4

CODE	GVWR RANGE	BRAKE SYSTEM
B	10001-14000	HYDRAULIC BRAKE
C	14001-16000	HYDRAULIC BRAKE
E	16001-19500	HYDRAULIC BRAKE
K	23501-26000	AIR BRAKE
M	26001-33000	AIR BRAKE

5

CODE	MAKE	DESCRIPTION
4	ISUZU	NPR / NPR-HD / NPR-XD
5	ISUZU	NQR / NRR
6	ISUZU	FTR / FVR / FVRDR

6

CODE	CAB TYPE
W	TILT CAB, BBC = 71 in
J	NON-TILT CAB, BBC = 110 in
S	TILT CAB, BBC = 81.5 in

7

CODE	AXLE DESCRIPTION
1	4X2, 2 AXLES, 1 DRIVING

8

CODE	ENGINE DESCRIPTION
6	5.2L, L4 DIESEL, TURBO, INTERCOOLER
D	6.6L, V8 GAS, L8T
F	CUMMINS B6.7, 6-CYL DIESEL, TURBO
V	ZF CETRAX LITE

9

CHECK DIGIT

10

CODE	MODEL YEAR
K	FOR 2019
L	FOR 2020
M	FOR 2021
N	FOR 2022
P	FOR 2023
R	FOR 2024
S	FOR 2025
T	FOR 2026

11

CODE	PLANT
7	FUJISAWA, JAPAN, IML
S	CHARLOTTE, MICHIGAN, THE SHYFT GROUP Inc.

12

CODE	DESCRIPTION
0	4500 HD DIESEL 14,500 lb. GVWR
K	4500 XD DIESEL 16,000 lb. GVWR
P	DIESEL 17,950/19,500 lb. GVWR
A	DIESEL 25,950 lb. GVWR
B	7500 DERATE/FVR DIESEL 25,950/33,000 lb. GVWR
2	3500/4500-HD GAS 12,000/14,500 lb. GVWR
5	5500 GAS 17,950 lb. GVWR
R	5500 GAS 19,500 lb. GVWR
E	

13-17

PLANT SEQUENTIAL NUMBER

Symbols Used in This Publication

⚠ WARNING

- **Failure to follow instructions identified by this symbol may result in death or injury to you and/or other people.**

👍 ADVICE

- Failure to follow instructions identified by this symbol could result in damage to your vehicle.

Installation of Body and Special Equipment

Anti-lock Brake System (ABS) & Electronic Stability Control (ESC)

ADVICE

- **Do not relocate or modify the Electro-Hydraulic Control Unit (EHCU).**
- **Do not modify the electrical harness and connector(s) of ABS/ESC systems.**
- **Do not modify the vacuum line(s) inside cab.**
- **Do not use ABS/ESC component wiring to extract power or ground circuits for accessories or added equipment.**
- **Do not relocate or change the installation direction of the yaw rate sensor. The yaw rate sensor's operation is dependent on its position relative to the vehicle's center of gravity as well as the direction of its mounting. Altering the installed location or direction may cause the system to operate incorrectly.**
- **Do not set final gear ratio to anything other than GM factory specification.**
- **The set value of the final gear ratio is programmed into the ABS/ESC control unit. If the final gear ratio is changed, the ABS/ESC systems may not operate correctly.**
- **Do not operate the vehicle with any combination of tires other than GM factory-specified tires. When brakes are applied, the ABS/ESC systems monitor the rotational speed differences of the front and rear tires and rely on a preset value for the tire diameter programmed into the control unit. Using tires that are different from the preset values or using tires that vary greatly in diameter from front to rear, may negatively impact braking performance and cause abnormal operation of the ABS/ESC systems. Contact ICTA/ICTC before equipping any tires other than GM factory-specified tires.**
- **Do not upfit chassis into a tractor or 5th wheel (Hot Shot) configuration.**
- **Do not route antenna wiring near the main vehicle harness to prevent electrical interference with the ABS/ESC control wires located within the main vehicle harness.**
- **Maintain more than 100 mm (3.94 inches) of clearance with ABS/ESC equipment (e.g. EHCU, speed sensor, yaw rate sensor, steering sensor, etc.) when installing the following types of equipment:**
    1. **Communication radio devices and their antennas.**
    2. **Motors, relays, and other devices that generate electrical noise.**

Calibration is necessary when replacing and/or removing any of the following components (contact GM dealership for more details):

- Electro-hydraulic control unit and/or yaw rate sensor.
- Steering sensor and/or steering-related components and steering wheel.

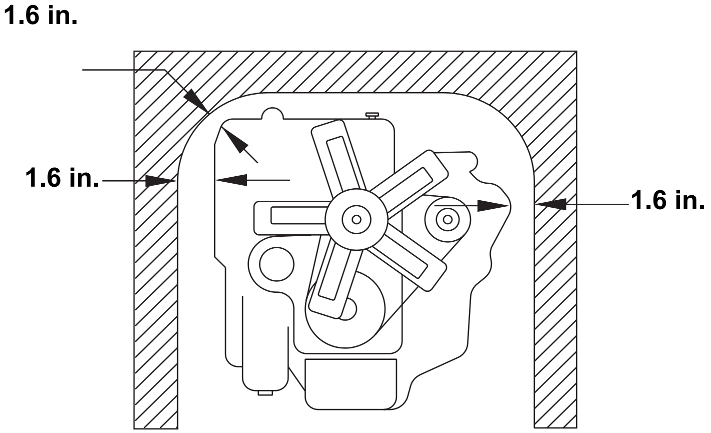
ADAS (Advanced Driver Assistance System)

When changes are made that affect the position or view of the stereo camera; it will be necessary to perform stereo camera reprogramming. Procedures that require the stereo camera to be reprogrammed include the following (contact an Chevrolet dealership for more details):

- Any instance where the camera position is moved from its factory-installed location or any vehicle modification that changes the view of the camera.
- Stereo camera, Windshield, or Instrument Panel (IP) removal and/or replacement.

Engine

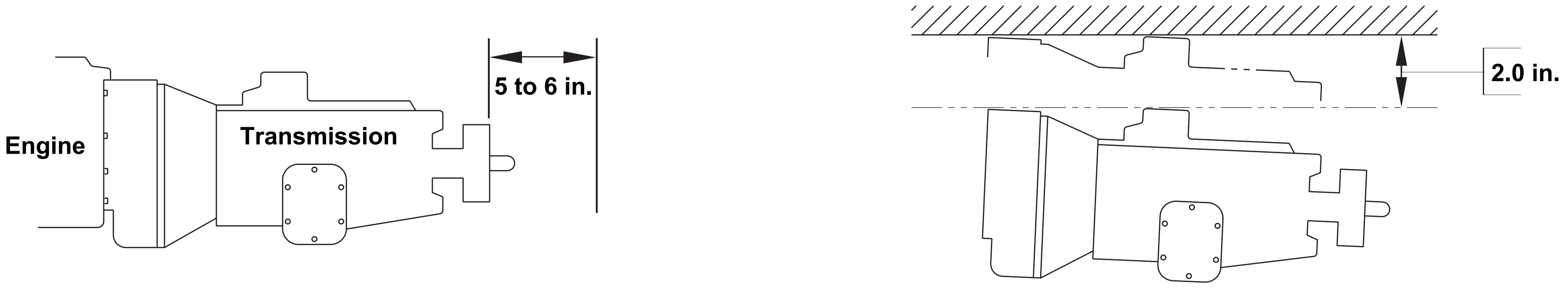
At least 1.6 inches of clearance should be maintained around the engine. At least 1 inch of clearance should be maintained to the front and rear of the engine. No obstacles should be added in front of the radiator or intercooler.



Front and Back Clearance: 1 inch

Transmission

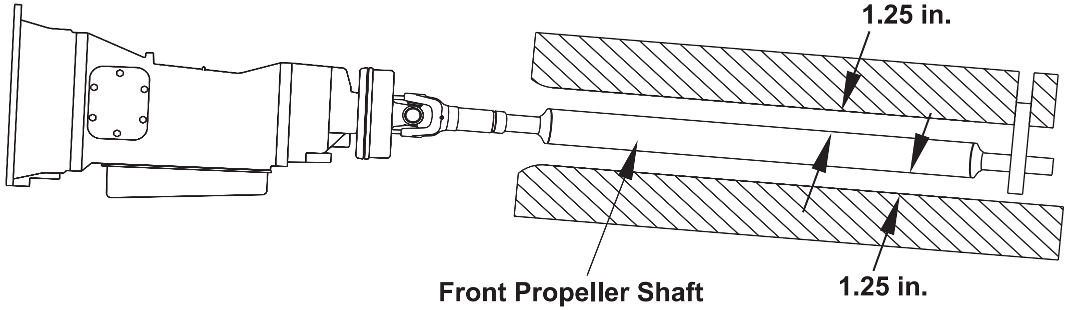
The transmission is removed from the rear. Enough clearance must be provided to allow for rearward movement of the transmission assembly. At least 2 inches of clearance should be maintained above the automatic transmission to allow for transmission removal. At least 1 inch of clearance should be maintained to the front and rear of the transmission. Clearance should be sufficient to allow 5 to 6 inches of unrestricted movement of the transmission assembly. In addition, provide at least 2 inches of clearance around the control lever on the side of the transmission to allow free movement without any binding.



Front and Back Clearance: 1 inch

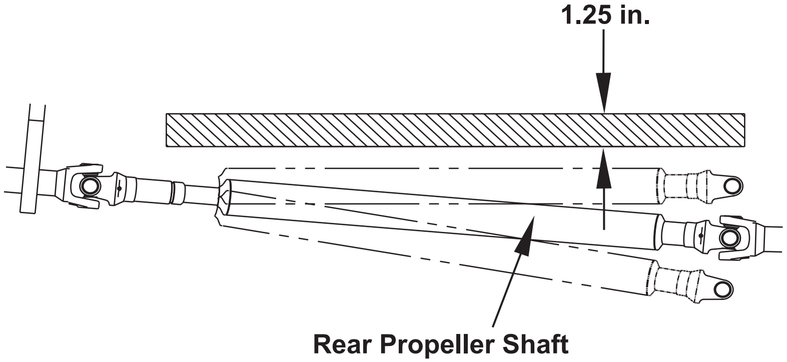
Front and Center Propeller Shafts

At least 1.25 inches of clearance should be maintained around front and center propeller shafts.


1.25 in.
Front Propeller Shaft
1.25 in.

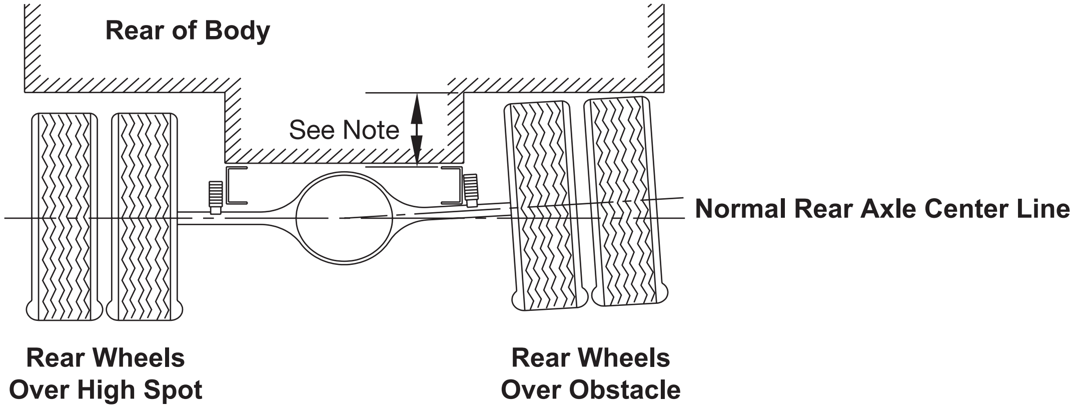
Rear Propeller Shaft

With the rear springs at maximum deflection, at least 1.25 inches of clearance should be provided over the rear propeller shaft.


1.25 in.
Rear Propeller Shaft

Rear Wheel and Axle

The design and installation of the body should allow sufficient clearance for full vertical movement of the rear wheels and axle when the vehicle travels over rough or unleveled surfaces.


Rear of Body
See Note
Normal Rear Axle Center Line
Rear Wheels Over High Spot
Rear Wheels Over Obstacle

Note: For recommended clearances, please refer to the Rear Axle Chart in each model's respective section.

Other Clearances

The transmission control cable may be broken if it is bent by or interferes with the body and its fixtures. To prevent this, 1 inch of minimum clearance should be provided. When cable is detached from body mounting, be sure not to bend the cable.

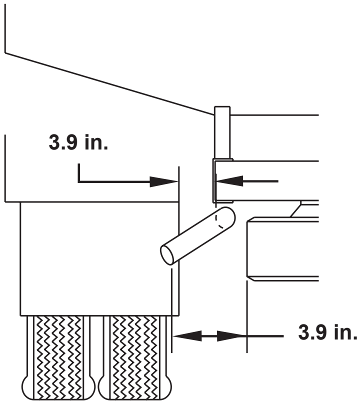
Accessibility to the grease nipple on the rear spring bracket/shackle should be provided so that serviceability with a grease gun is not hampered.

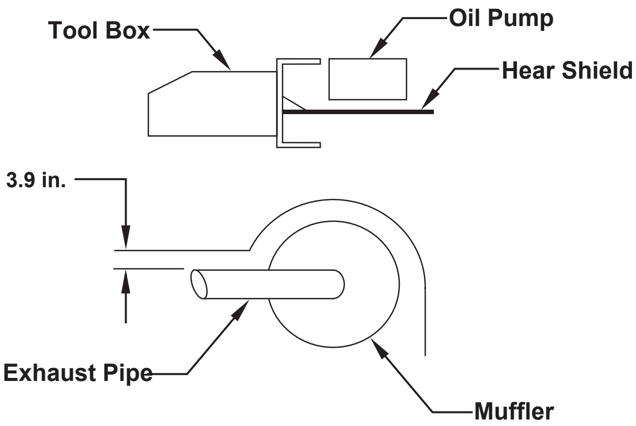
Parts	Location	Minimum Clearance (in)
Brake Hose	Axle Side	6.7
	Frame Side	1.6
Shock Absorber	Axle Side	2.4
	Frame Side	1.2
Parking Brake Cable	-	1.2
Fuel Hose	-	1.6

Exhaust Pipe Clearances

If flammable materials such as wood are used in the body, provide at least 3.9 inches of clearance between the body and any parts of the exhaust pipe, DPF/SCR Package. If it is impossible to maintain the minimum clearance, use a heat shield. Also use a heat shield if an oil pump or line is located above the exhaust pipe, muffler or catalytic converter.

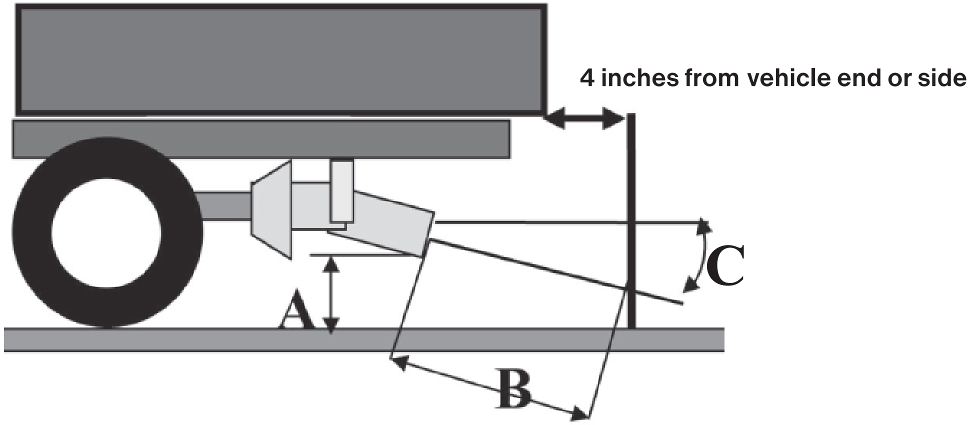
1. Clearances around SCR system components must be greater than 1.0 inch at all times to avoid potential contact between the body and the exhaust components. The 1.0 inch allows for thermal expansion and assembly tolerance of the exhaust system. It does not account for dynamic movement in the body due to road conditions and other loads. Body companies are instructed to adjust this 1.0 inch clearance as required to account for body displacement while driving. This guidance does not supersede guidance or exhaust clearances for temperature sensitive or flammable components.
2. Exhaust temperatures have not changed since the introduction of DPF in 2007.





Exhaust Heat Clearances

During the DPF regeneration cycle, exhaust gas temperatures are hot. Therefore, care should be exercised in placement of the pipe's end location and angle. Do not locate any body components or equipment around the exhaust pipe's end area.



Dimension	Clearance
A	8 in. (minimum)
B	18 in. (minimum)
C	45 deg. (maximum)

Exhaust System

The exhaust system has a crucial role in meeting 2010 EPA regulations. In order to maintain compliance with the 2010 EPA emissions levels the Diesel Particulate Filter (DPF) and SCR package must not be moved. The distance between the engine exhaust manifold down pipe and Diesel Particulate Filter (DPF) / Selective Catalytic Reduction Package (SCR) must be maintained and the pressure in the system must be sustained at a constant level. Due to increased temperatures in the exhaust system during the regeneration cycle and the heat stress caused by these temperatures, body builders should closely evaluate the placement of equipment and provide protection to these added components as needed.

Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR) Restrictions

1. The DPF/SCR has exhaust pressure pipes and temperature sensors. Care must be taken when a body is installed so as to not damage pipe sensors.
2. The DPF/SCR should be free from impact or vibration during body installation.
3. The DPF/SCR must have enough room for disassembly of the unit for service and cleaning.
4. The DPF/SCR switch in the cab should not be removed or disabled. No modification or relocation of the DPF/SCR unit, pressure pipes, and sensor is permitted.

Exhaust System Modification

Modification of the exhaust system should be avoided. If modifications are absolutely necessary, the following points should be maintained.

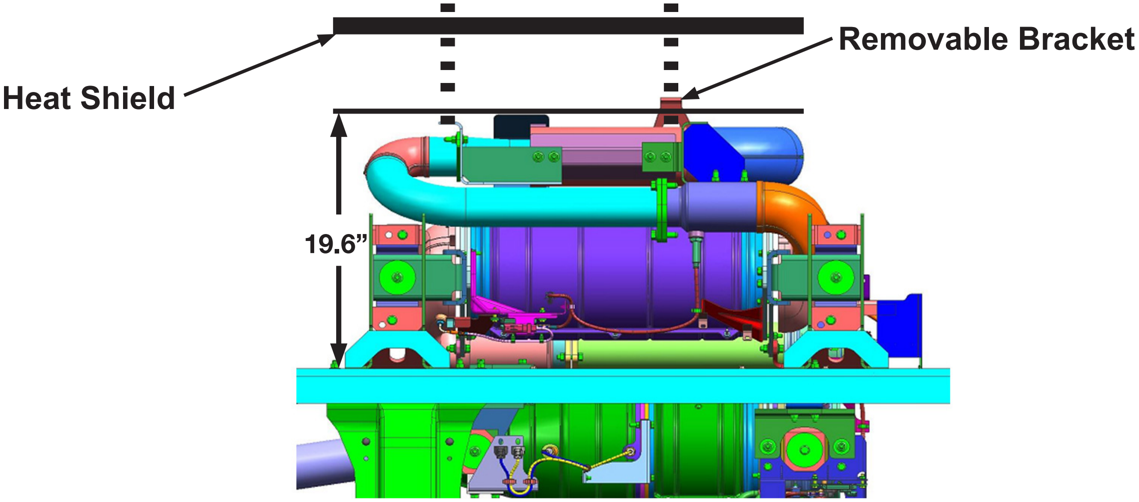
1. Maintain the clearance specified in the table below between all parts of the exhaust system and any fuel lines, brake lines, brake hoses, electrical cables, etc. The exhaust outlet should not point toward any of these parts.

Component	Clearance Dimension
Brake Lines	2.4 in. or more. If the combined section of a group of parallel brake lines is more than 7.8 in., a clearance of 7 in. or more should be provided.
Flexible Brake Hoses	7.8 in. or more. The temperature of flexible brake hoses should not exceed 158°F. If the highest temperature is not measurable, a clearance of more than 15.7 in. should be maintained between the hoses and the exhaust system.
Wiring Harnesses and Cables	7.8 in. or more. The temperature of flexible brake hoses should not exceed 158°F. If the highest temperature is not measurable, a clearance of more than 15.7 in. should be maintained between the hoses and the exhaust system.
Steel Fuel Lines	3.1 in. or more.
Rubber or Vinyl Fuel Hoses	5.9 in. or more.

2. If a tool box is installed, it should preferably be made from steel. If a wooden tool box is installed, at least 7.8 inches of clearance should be maintained between the tool box and any parts of the exhaust system.
3. If the exhaust system is modified, it is the responsibility of those making the modification to ensure that the noise level meets appropriate standards.
4. If the exhaust system is modified it is the responsibility of those making the modification to ensure that the emission levels meet appropriate standards.
5. Exhaust system component temperatures are sufficient to ignite flammable materials; efforts should be made to prevent flammable materials from interacting with the exhaust system.

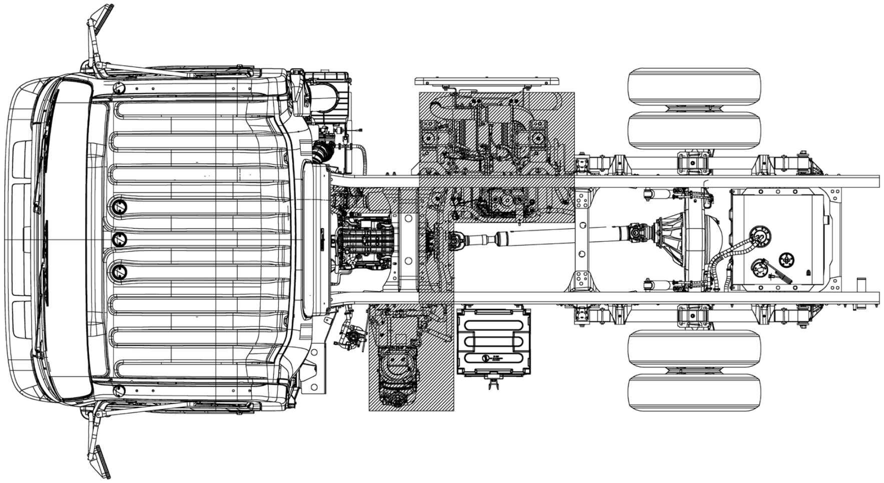
DPF/SCR Heat Shield Removal

The exhaust external heat shield does not impact vehicle emissions or emissions system durability. This shield can be removed or modified in order to facilitate body or equipment mounting, but the completed vehicle manufacturer should ensure that, when completed, the exhaust will be adequately shielded to prevent unintentional contact with hot exhaust components, and that heat transfer to body components is not so high as to present safety or durability risks. Detailed information on removal of the heat shield can be found in the service manual available on line at www.gmupfitter.com.



3500, 4500 & 5500 No Modification Zones

The DPF/SCR unit **CANNOT** be modified or moved. The DEF tank and pump **CANNOT** be modified or removed. DEF lines and coolant lines **CANNOT** be modified or rerouted.



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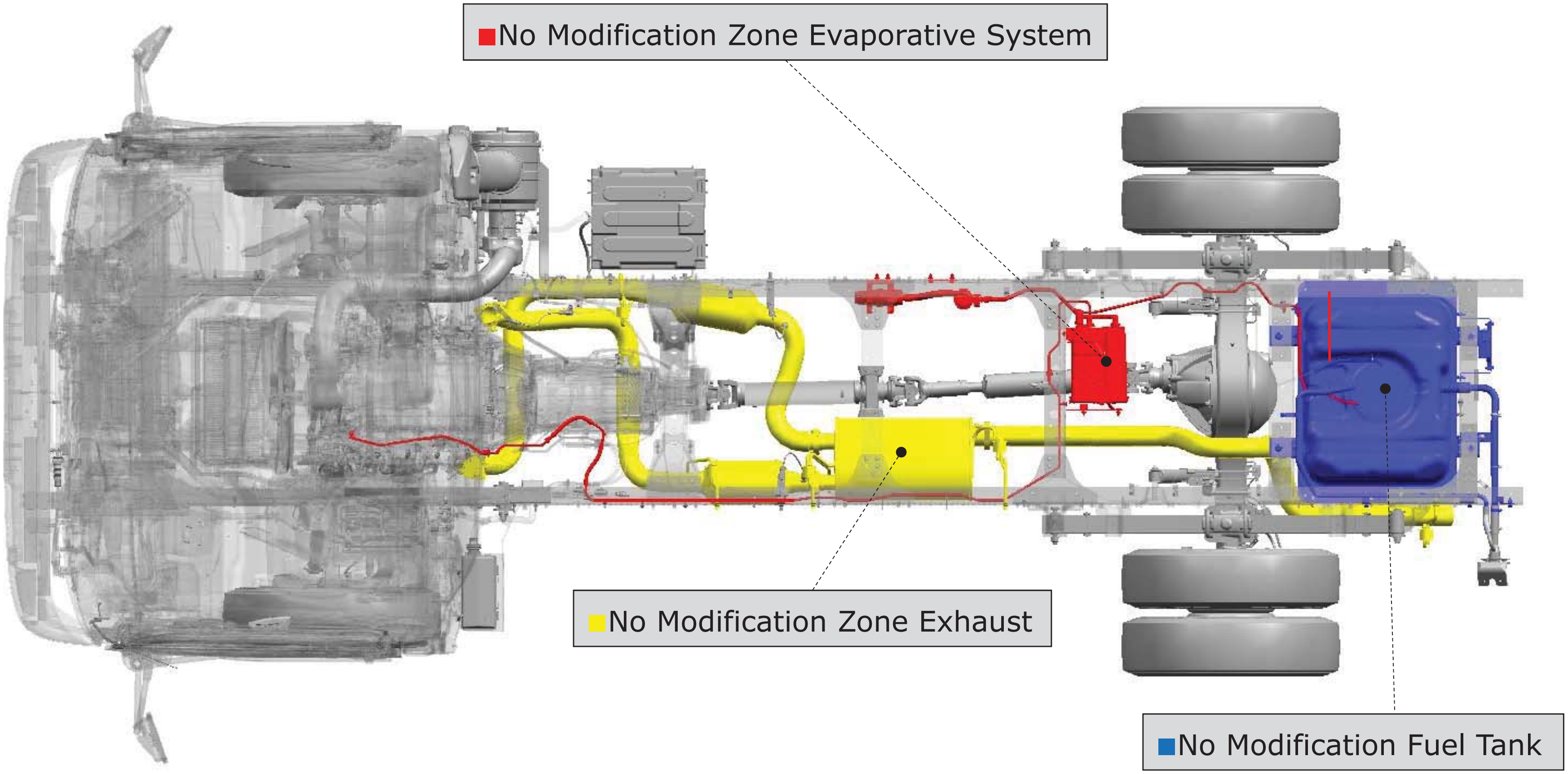
Gas (6.6L Engine) No Modification Zones

The vehicle exhaust, evaporative system, and fuel tank are integral parts of the evaporative/engine and emission/diagnostic control system and **CANNOT** be modified or rerouted.


🟥No Modification Zone Evaporative System
🟨No Modification Zone Exhaust
🟦No Modification Fuel Tank

Body Installation

Mirrors

The Chevrolet LCF chassis will accommodate up to 96-inch wide bodies without modification to the mirror brackets.

⚠ **WARNING**

- **Bodies wider than 96 inches and up to 102 inches wide will require modified mirror brackets. This modification can be made at the port and the vehicle order/label will indicate a Regular Product Option (RPO) of IU2, indicating “Mirror Bracket for 102 wide body”. The brackets can also be modified by the GM or the Body Company by installing mirror brackets ordered from Chevrolet dealer.**

Side Step Door Installation Recommendations

1. Floor of body should be at least 10” above frame rail (2.5” wood + 4” long sill + 3” cross sill + 1.125” floor).
2. Forward end plate of step well area can interfere with SCR system.
3. All body components should maintain a minimum 1.0” of clearance to exhaust components UNDER ALL (DYNAMIC) CONDITIONS. (Body company will need to add to this 1.0” clearance to account for flex or movement in the body).
4. Outer heat shield on SCR system can be removed prior to mounting body if required for clearance. Care should be taken to adequately shield exhaust.
5. A driver’s side steps can also be accommodated depending on the door location. If the door is located behind the DEF tank, the battery may have to be relocated.
6. Access hatch for DEF tank fill may have to be added, depending on door location

Special Equipment on the Chassis

When installing special equipment on the chassis, extra consideration must be given to the weight and construction of the equipment to assure proper distribution of the load. Localization of the load should be prevented. All special equipment should be properly secured into position. We recommend the use of subframe members when installing special equipment.

Subframe Design and Mounting

The sub frame assembly should be mounted as close to the cab as possible. It should be contoured to match the shape and dimensions of the chassis frame as closely as possible.

Crew Cab Body / Frame Requirements

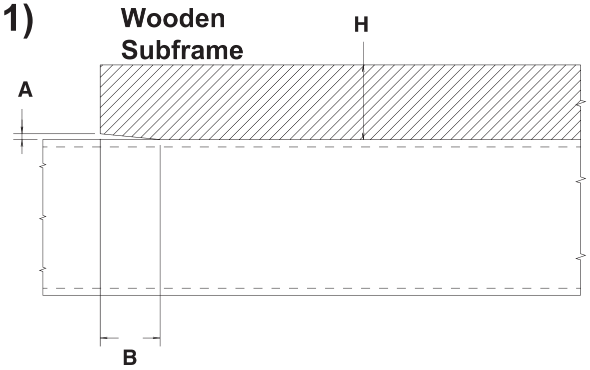
The Chevrolet will be available in two wheelbases, 150 and 176 inches with CA's of 88.5 and 114.5 inches respectively.
On this model chassis, GM will require that the body installed on the chassis have an understructure manufactured with any of the following structural steel “C” channels:

1. 4” x 1-5/8”, 7.5 lb./ft.
2. 5” x 1-3/4”, 6, 7 or 9.0 lb./ft.
3. 6” x 2”, 8.2, 10.5 or 13 lb./ft.

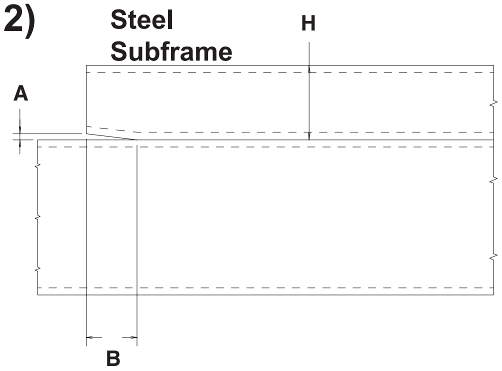
Subframe Contour

Contouring of the front end of the subframe members as shown in the three illustrations below will prevent stresses from being concentrated on certain areas of the chassis frame.

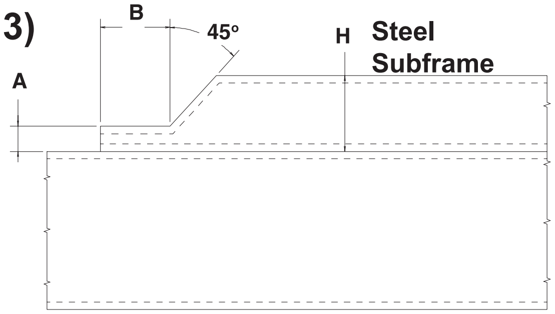
1)


Wooden Subframe
H
A
B

2)

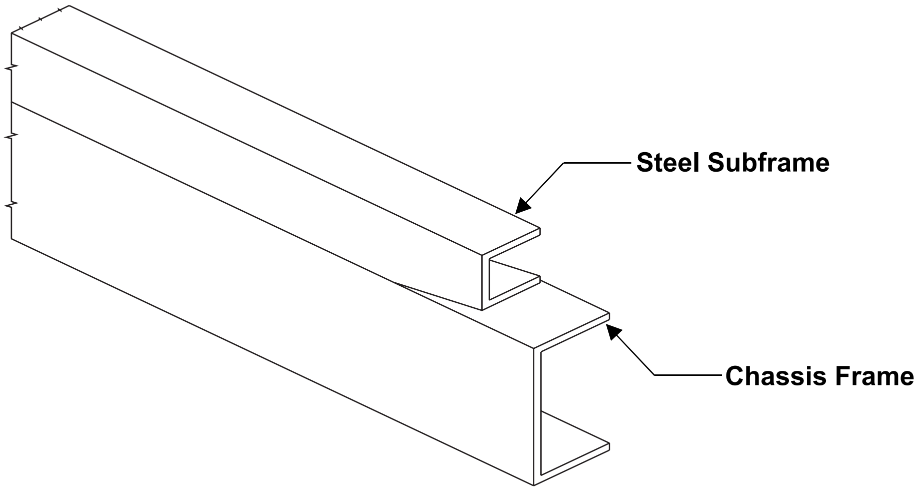

Steel Subframe
H
A
B

3)


B
45°
H
Steel Subframe
A

Drawing	A	B
1)	0.2 in.	$\frac{H}{2} \cong H$
2)	0.2 in.	H or greater
3)	$\frac{H}{3}$	H or greater

When using a steel subframe, do not close off the end of the subframe.


Steel Subframe
Chassis Frame

Prohibited Attachment Areas

Do not attach the subframe to the chassis frame with a bolt or bracket at the points indicated in the following illustrations.

1. At the front end of the subframe. The attaching bolt or bracket must be at least 2 inches behind the kick up point of the subframe (Figure 1).
2. Within 8 inches of bends in the chassis frame or the attachment points of any crossmembers (Figure 2).

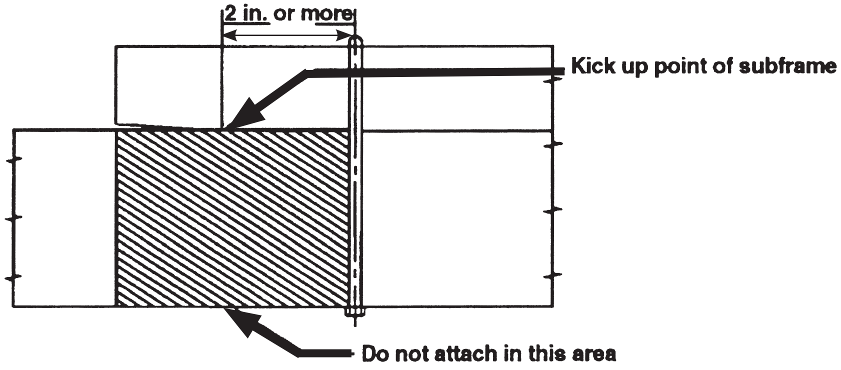

2 in. or more
Kick up point of subframe
Do not attach in this area

Figure 1

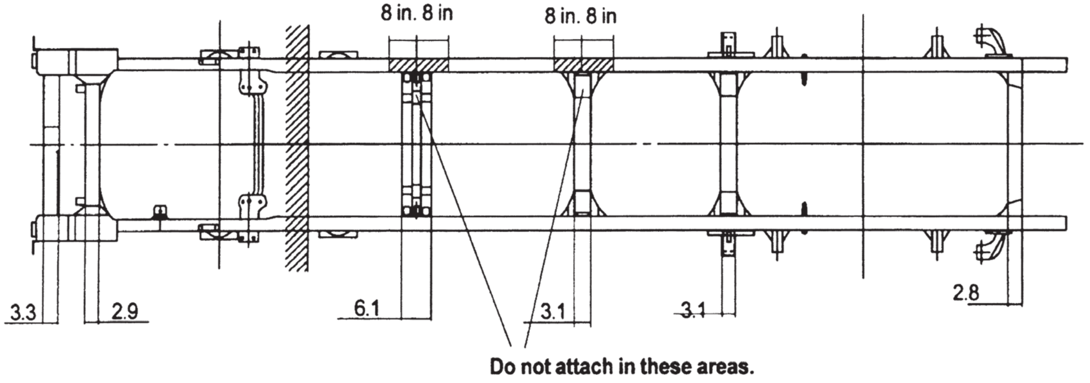
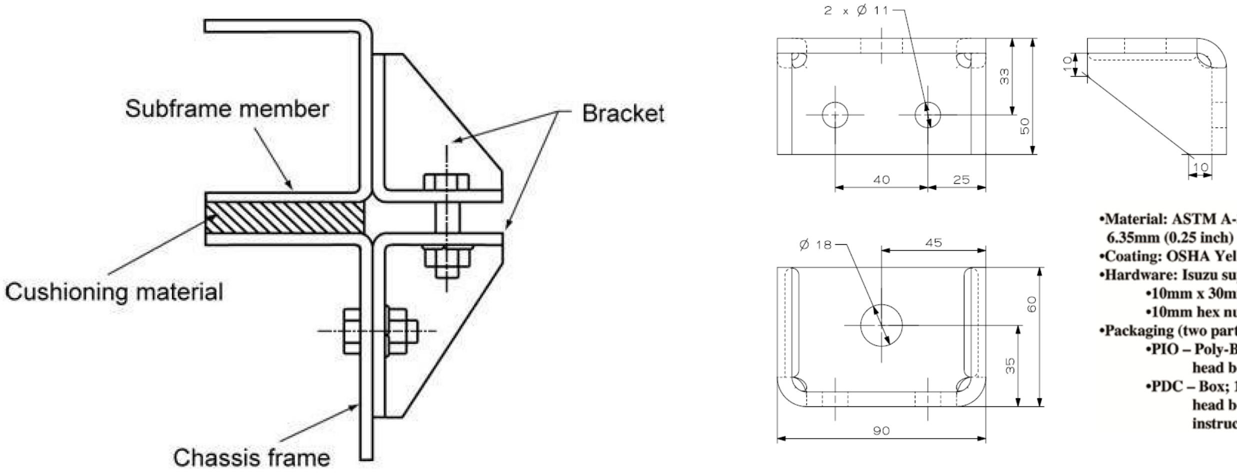

8 in. 8 in
8 in. 8 in
3.3
2.9
6.1
3.1
3.1
2.8
Do not attach in these areas.

Figure 2

Subframe Mounting - Bracket Installation

Mounting brackets should be clamped to the chassis frame using bolts. For proper positions in which to install the bolts, refer to the section of this document “Modifications to the Chassis Frame.” In addition to the illustrated bracket and U-bolts a shear plate may be required for adequately body mounting. The body company will be responsible for engineering their own mounting system.


Subframe member
Bracket
Cushioning material
Chassis frame
2 x Ø 11
33
50
40
25
10
10
Ø 18
45
60
35
90

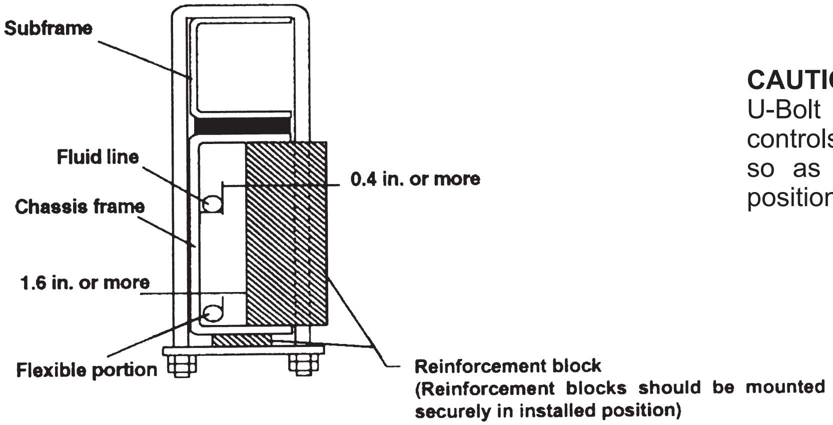
•Material: ASTM A-36 or equivalent 6.35mm (0.25 inch) thick
•Coating: OSHA Yellow powder coating
•Hardware: Isuzu supplied, two each
  •10mm x 30mm hex head bolts
  •10mm hex nuts
•Packaging (two part numbers):
  •PIO – Poly-Bag; 1 bracket, 2 10mm x 30mm hex head bolts, 2 10mm hex nuts
  •PDC – Box; 1 bracket, 2 10mm x 30mm hex head bolts, 2 10mm hex nuts, installation instructions

Note: Body mounting bracket will be painted “YELLOW” of easy identification

Figure 3

U-bolt Installation

When U-bolts are used to retain the subframe, reinforcement blocks must be installed in the frame members. This will prevent distortion of the frame flange as they are tightened. The drawing indicates the correct placement of reinforcement blocks. If you use wood blocks, be sure that there is sufficient clearance between them and any parts of the exhaust system. The use of J-bolts to retain the subframe is strictly prohibited.If any fluid lines or electric cables are located near the reinforcement blocks, you must provide at least 0.4 inches of clearance between rigid or stationary portions, and at least 1.6 inches between moveable or flexible portions of the lines.


Subframe
Fluid line
Chassis frame
0.4 in. or more
1.6 in. or more
Flexible portion
Reinforcement block
(Reinforcement blocks should be mounted securely in installed position)

CAUTION:

U-Bolt placement is critical with new emission systems and controls. Extra care must be taken when placing bodies on chassis so as not to damage these components. For the installation positions of the U-bolts, refer to “Prohibited Attachment Areas.”

Front U-bolt and Mounting Bracket, Mounting Locations Ahead of Transmission

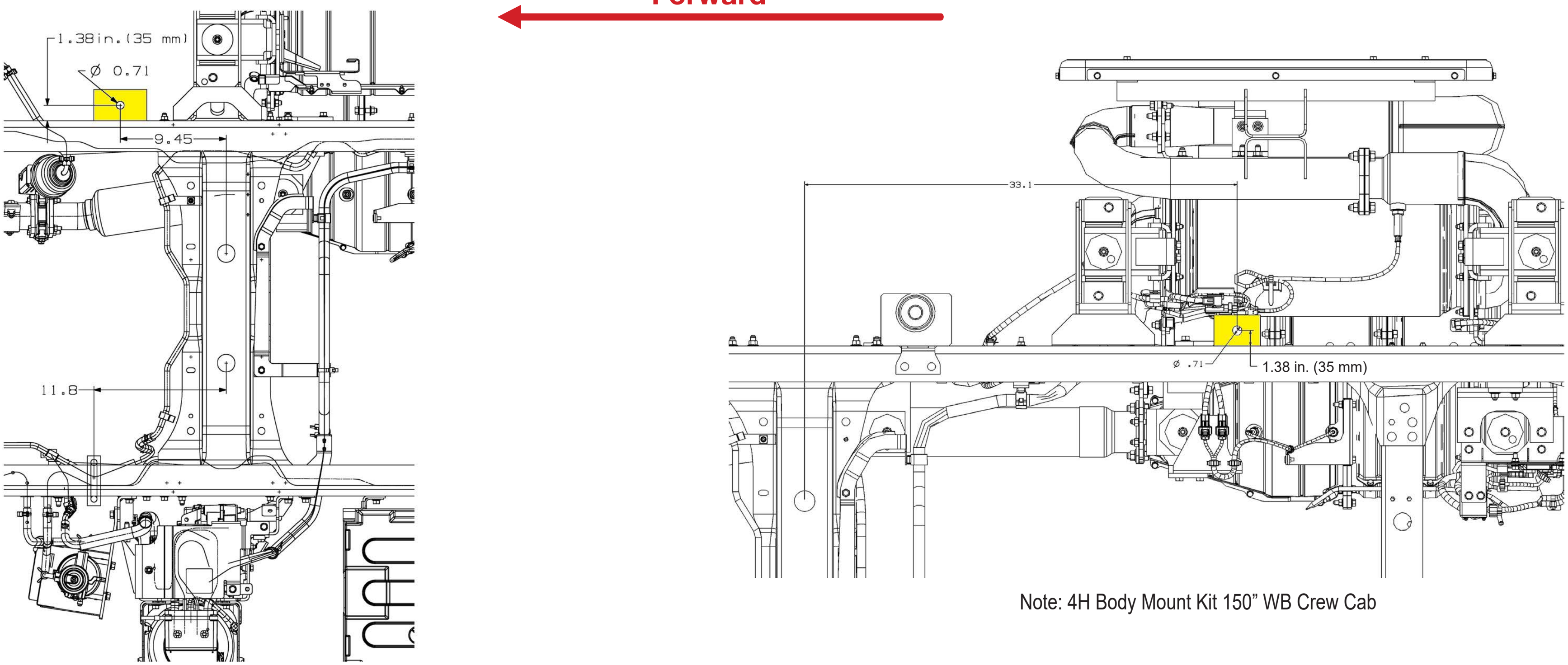
Mandatory location due to after treatment device location and interior frame components. The chassis will be supplied with one steel crush block in cab for left hand forward body attaching location as illustrated in the drawings below and one body mounting bracket (painted yellow) attached to the right hand frame rail in the location shown in the drawings below. Body Builder will be required to design a mating bracket for attaching the body to the yellow painted chassis body mounting bracket (Ref Figure 3 for illustration of bolt clamping 2 brackets). No U-bolt type attaching allowed.

Front, RHS U-bolt on 150” Wheelbase Crew Cab interferes with after treatment system. Chevroler will supply body mounting bracket on chassis to facilitate body mounting on the passenger side of the vehicle as illustrated in Figure 4 below.

Standard Cab - Body Mounting Bracket Location

Crew Cab 150” WB - Body Mounting Bracket Location

Forward



Note: 4H Body Mount Kit 150” WB Crew Cab

Note: 4H Body Mount Kit

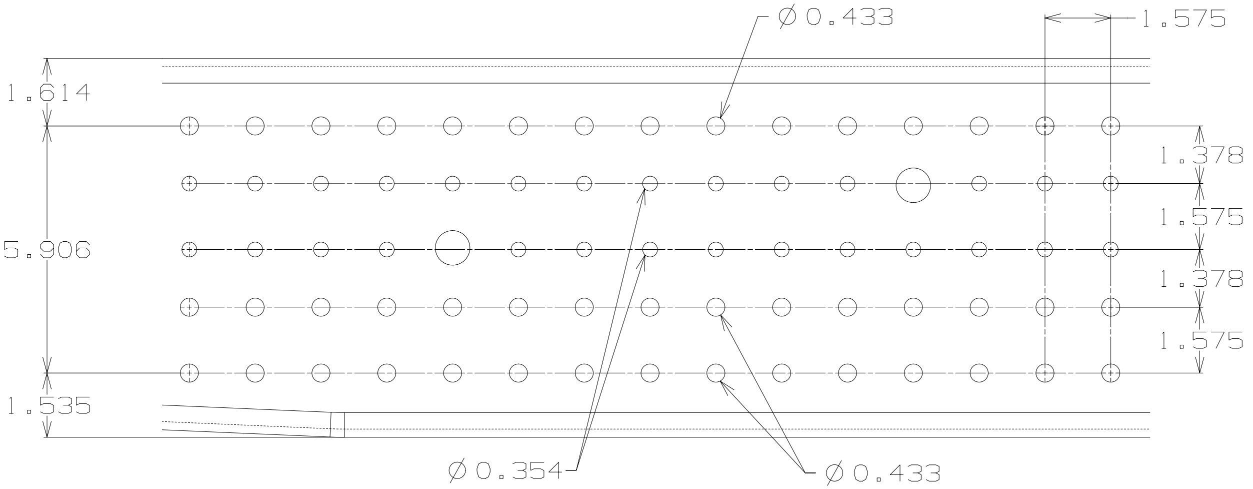
Crush Block and U-Bolt
(Left Hand -Rail)

Body Mounting Bracket
(Right Hand -Rail)

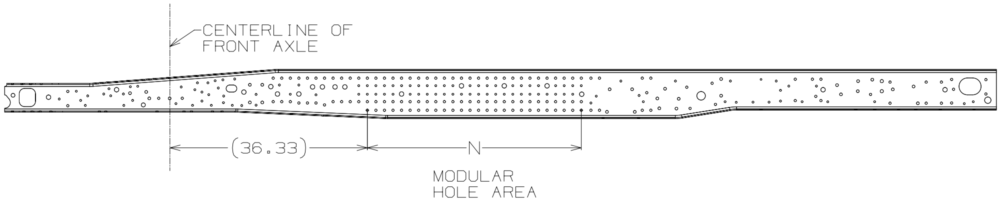
Figure 4

Modular Frame Hole Pattern

The frame material is a heat treated carbon manganese, and low alloy steel with good welding characteristics. The frame has an 40mm modular hole spacing standard. This standard pattern will assist with body mounting.


Ø0.433
1.575
1.614
1.378
1.575
5.906
1.378
1.575
1.535
Ø0.354
Ø0.433

Depending on model, wheelbase and chassis specification some holes are in use and some holes are intentionally missing. (Subject to change without notice).


CENTERLINE OF FRONT AXLE
(36.33)
N
MODULAR HOLE AREA

WB (inches) 4500 HG, 4500 XD, 5500 XG, 5500 XD	N (inches)
109	39.37
132.5	63
150	80.3
176	105.5

Note: Re-tighten all attaching parts that are loosened during body installation.

Note: Dimensions in inches

Modification of the Frame

Modifications of the chassis frame should be held to an absolute minimum. Modification work should be performed according to the instructions in the following paragraphs. When modification is complete, chassis frame members should be carefully inspected to eliminate the possibility of any safety-related defects.

NOTE: PLEASE REFER TO NOTES ON CHASSIS FRAME MODIFICATION WITH ANTILOCK BRAKES.

Working on Chassis frame

The chassis frame is designed and built with consideration for proper load distribution. Sufficient physical strength is provided when the load is evenly distributed. Installation of special equipment on the chassis frame can cause variations in load distribution. If even distribution of load is not kept in mind when the equipment is installed, localization of stresses on specific areas of the frame could cause cracking of the chassis frame members or other problems, even if the total weight of the equipment is within the design limit. The chassis frame is designed as an integral unit. Therefore, we do not recommend cutting the chassis frame under any circumstances.

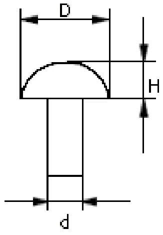
Drilling and Welding

WARNING

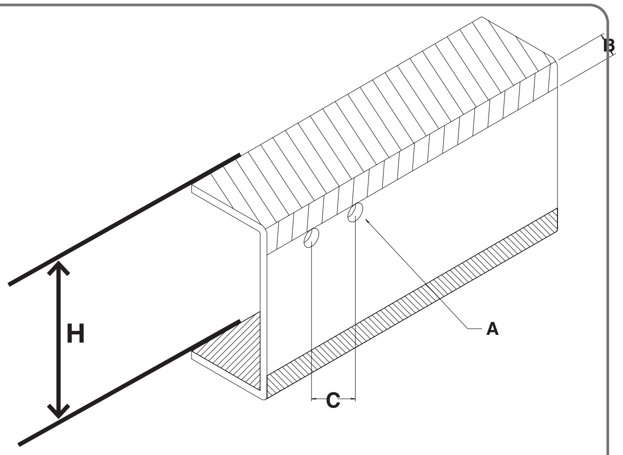
- **For vehicles equipped with electronic engines and or electronic or hydra-matic transmissions, electric arc welding must be done with the negative battery cable disconnected.**

ADVICE

1. Do not drill or weld in the shaded portions of the chassis frame members (see below). Do not weld within 0.8 inches from the edges of any existing holes.
2. Hold the length of any welding beads within 1.2-2.0 inches. Allow at least 1.57 inches between adjacent welding beads.
3. All holes must be drilled. Do not use a torch to make any holes.
4. All riveting must be done with cold rivets. Do not use hot rivets.
5. The flange of the chassis frame must not be cut under any circumstances.
6. The subframe must be attached to the chassis frame with bolts. Do not weld.
7. Repaint exposed metal after drilling.



Rivet size detail:
D - 18mm (medium duty truck) / 21mm (heavy duty truck)
d - 11mm (medium duty truck) / 13mm (heavy duty truck)
H - 7.7mm (medium duty truck) / 11mm (heavy duty truck)



Dimensions:
A - no more than 0.59 inches in diameter
B - must be more than H/5 for welding and H/7 for holes
C - must be more than 1.57 inches
H = Frame Height

Figure 5

Reinforcement of Chassis Frame

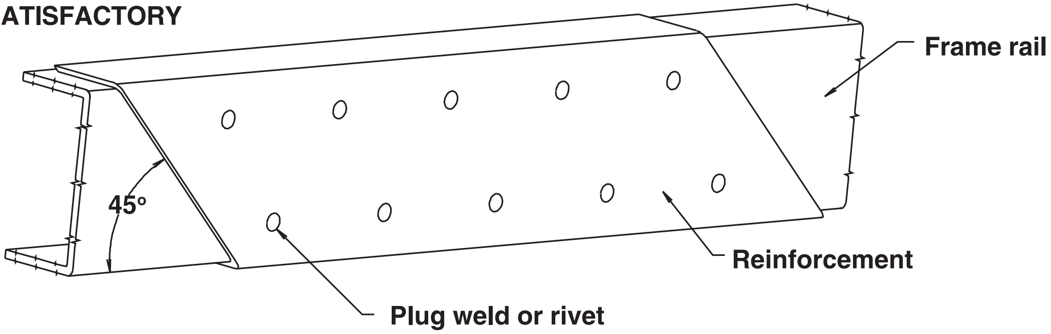
Reinforcements must be installed to prevent the considerable variation in the section modulus. They must be welded so as to avoid localized stresses. The frame of the LCF diesel is made of HT540 Hot-Rolled steel and the LCF gas is made of SAPH440 mild steel. The drawing below illustrates the correct and incorrect methods of frame reinforcement.

Welding

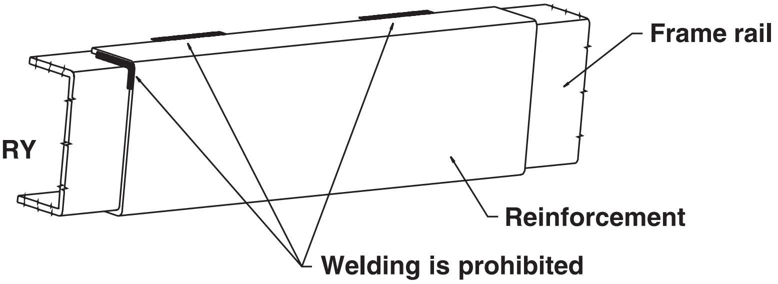
Keep reinforcement plates and chassis frame free from moisture and water. Avoid cooling with water after welding. Use a suitable means to protect pipes, wires, rubber parts, leaf springs, etc. against heat and effect of sputtering. Remove fuel tank assembly when welding portions near the fuel tank. Remove coat of paint completely when welding painted areas. Repaint exposed metal after welding.

When installing reinforcement by riveting or plug welding, place plugs or rivets in a zigzag pattern. When performing plug welding, be sure that electrical components, such as electric harnesses on the inner side of a chassis frame side member, are a minimum of 50mm apart from welding site. When inserting a rivet in a hole from which another rivet has previously been removed, the rivet should be 1 or 2mm larger in diameter than the removed one. Cold rivet only.

SATISFACTORY

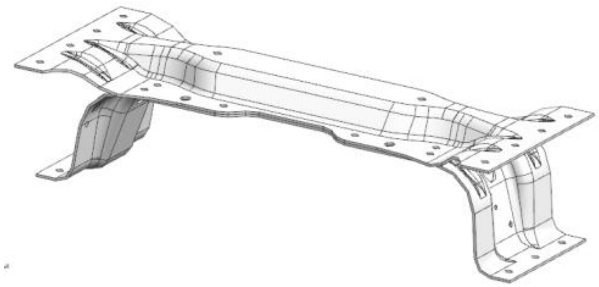


UNSATISFACTORY

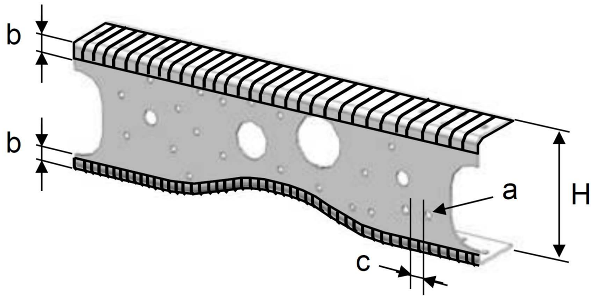


Crossmember Modification

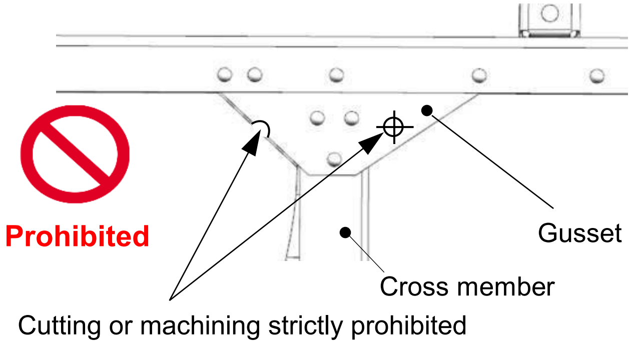
Alligator type cross member - For alligator type, hole drilling, notch making, and welding are prohibited.



Channel type cross member: a – Allowable maximum hole diameter is 9mm, and this hole should be used only for piping or harness routing.
b – Prohibited area, no drilling should be done in this area.
c – See Figure 5 for minimum required distance.



Gusset: Hole drilling and notch making are prohibited.

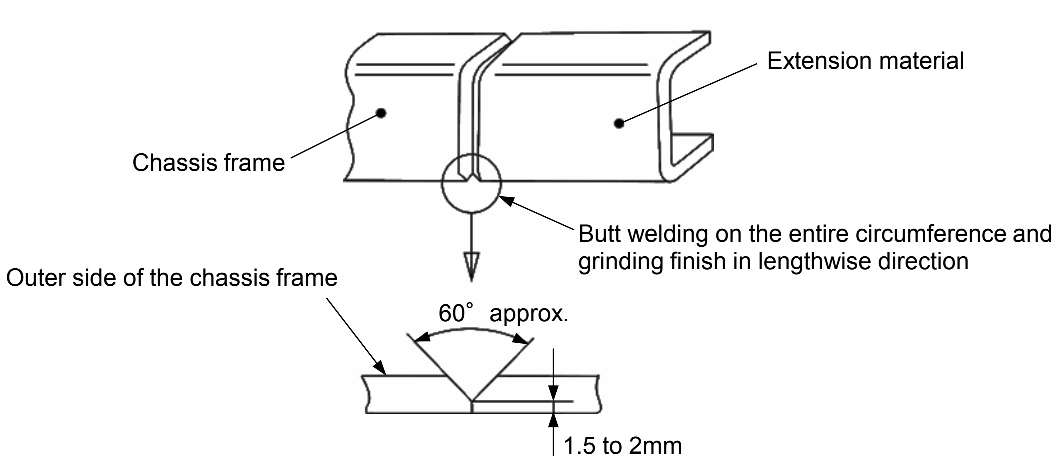

Prohibited
Gusset
Cross member
Cutting or machining strictly prohibited

Rear Overhang Modification

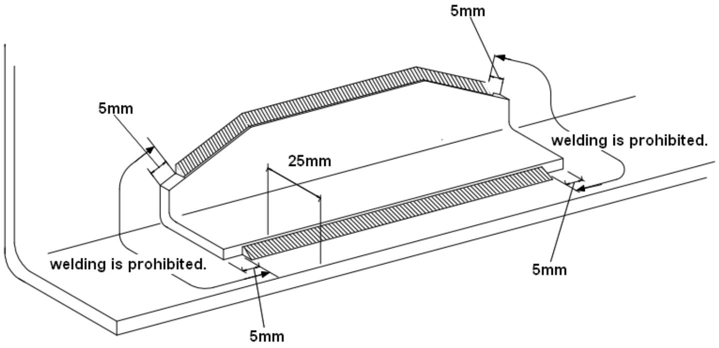
If a body protrudes outward from the rear end of the chassis frame by 300 mm (11.8 in.) or more, lengthen the rear overhang of the chassis frame as indicated below. If it is necessary to cut the chassis frame, ensure that the cut location does not split existing holes.

1. Extension material
   - The extension material should be equivalent to that of side members. Refer to specification information for the vehicle model in consideration.
   - Thickness and bending radius of the extension material should be the same as that of side members. Refer to specification information for the vehicle model in consideration.

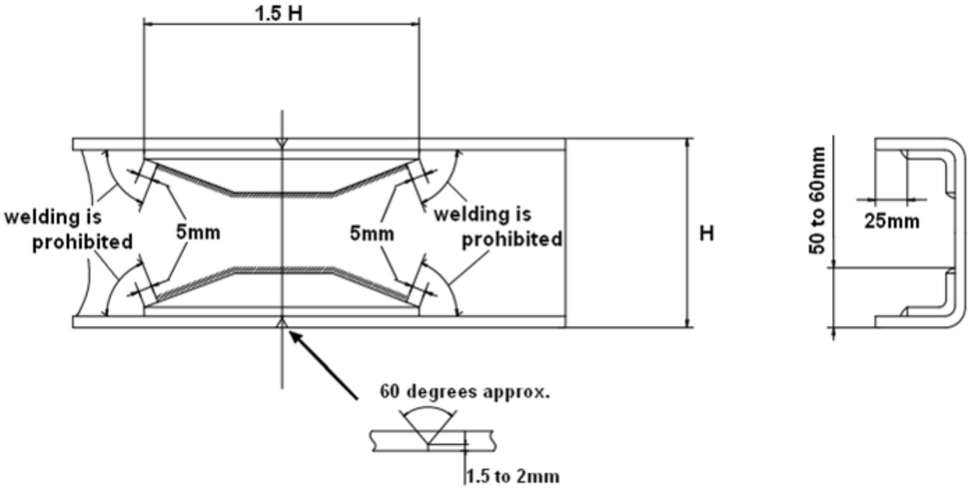
2. Installing extension material
   - **Extension material is 300mm or shorter:** Join extension material and chassis frame with a continuous butt weld around the entire circumference. After welding, grind finish weld surface.


Extension material
Chassis frame
Butt welding on the entire circumference and grinding finish in lengthwise direction
Outer side of the chassis frame
60˚ approx.
1.5 to 2mm

- **Extension material is longer than 300mm:** Join extension material and chassis frame with a continuous butt weld around the entire circumference, and then fit a reinforcement on the inner side of the chassis frame and extension material.


5mm
5mm
25mm
welding is prohibited.
welding is prohibited.
5mm
5mm

Side member thickness [mm]	Reinforcement material thickness (recommendation value) [mm]
8.0 at minimum	7.0
7.5	5.5 to 7.0
7.0	4.5 to 6.0
4.0 to 6.0	4.5


1.5 H
welding is prohibited
5mm
5mm
welding is prohibited
H
50 to 60mm
25mm
60 degrees approx.
1.5 to 2mm

Fluid Lines

Do not disturb the layout of any brake lines or fuel lines unless absolutely necessary. When modification is needed, follow the instructions below carefully to ensure safety. Brake fluid lines must not be cut and spliced under any circumstances. We do not recommend the cutting or splicing of any fuel lines, but if it is absolutely necessary, be sure that the correct fitting and tools are used to form the joint, and then pressure test the joint. Steel lines are metric sizes.

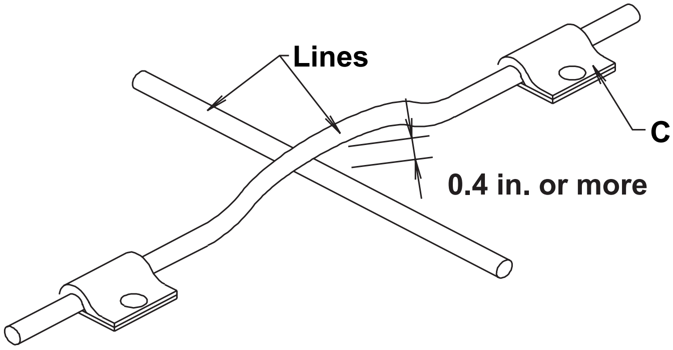
Preparation of Additional Lines

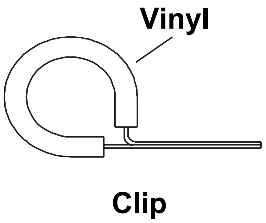
1. Where possible, use only genuine Chevrolet lines as supplied by authorized Chevrolet dealers.
2. Use the correct metric flaring and bending tools to form the lines.
3. Avoid repeated bending. Do not use heat for flaring and bending the lines. Before and after forming the new lines, examine them carefully for scratches, distortion, dents and the presence of any foreign matter.

Installation of Additional Lines

Install new lines away from adjacent parts and away from any sources of heat.

1. A minimum clearance of 0.4 inches must be maintained between lines. Where necessary, clip the lines into position in order to maintain this minimum clearance.
2. Minimize any crossing between lines. If a crossing is unavoidable, use the following procedure:
    a. At least 0.4 inches of clearance should be maintained between lines at the crossing point.
    b. If the 0.4 inches of clearance cannot be maintained, or if the lines are subject to vibration, clip them securely.
3. Plan the bends and clipping points of the lines to minimize vibration and the resulting fatigue.
4. Use rust-proofed clips and apply vinyl coating to the portions of the lines to be clipped.
5. Install new lines in positions where they are protected against water, dirt, grit, sand, rocks and other foreign matter that can come from above or below, or can be flung up by the wheels.





Fuel System

Relocation of the fuel tank, or installation of additional fuel tanks, is not recommended. If modifications to the fuel system are unavoidable, follow these recommendations:

1. Maintain adequate clearance between the fuel tank and any other device or structure.
2. Do not connect any additional fuel hose.

Electrical System Modifications

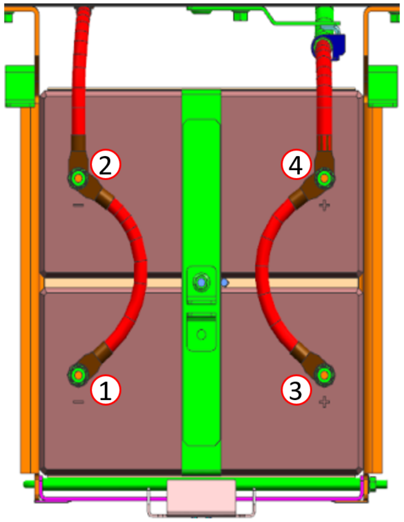
⚠ WARNING

- **Before servicing any electrical component, the ignition key must be in the LOCK position and all electrical loads must be OFF, unless instructed otherwise in Chevrolet service procedures. If a tool or equipment could easily come in contact with a live exposed electrical terminal, also disconnect the negative battery cable. Do not disconnect cable within 3 minutes after turning the ignition key to the Lock position. Failure to follow these precautions may cause personal injury and/or damage to the vehicle or its components.**

ADVICE

- Modifications/add-on wiring must be carefully reviewed to ensure compatibility with the base vehicle wiring by reviewing system schematics, wire routing paths, harness connections, etc.
- Due to the wide range of modifications that may be required for vocational needs, it is not feasible for the O.E.M. to take into account all potential revisions. For this reason, any person modifying existing vehicle wiring must assume responsibility that the revisions have not degraded the electrical system performance.
- Any add-on wiring needs to be properly fused and routed to prevent cut, pinch, and chafe problems, as well as avoid exposure to excessive heat.
- Care must be exercised that existing vehicle interfaces do not have their current load capabilities exceeded, and that the respective control devices are not overloaded.
- Added wire size should be at least as large as the wire to which it is attaching in order for fuse protection to be maintained.
- Electrical wiring components can be obtained through your authorized Chevrolet dealers.

Battery Terminal Tightening Torque



No.	NUT SIZE	TORQUE
① ~ ④	3/8-16 (inch)	15±2 (N·m)

Electrical Wiring and Harnessing

To increase the reliability of the wiring, all frame harnesses are covered with corrugated vinyl tubing. The following instructions apply to extending or modifying these harnesses. See the Electrical Section for information on commonly used circuits in the LCF Chassis.

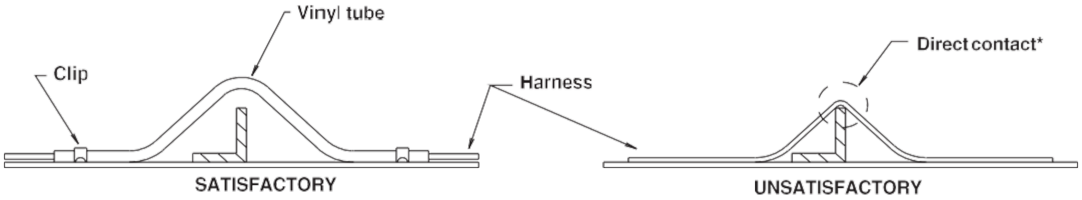
Wiring

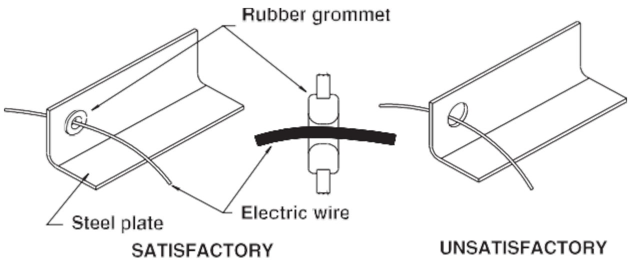
ADVICE

- Most wiring connections on GM vehicles are made with terminals. We recommend the use of terminals when splicing cables and wires.
- When splicing, use new wire of the same gauge, and do not make splices inside the corrugated tubing.
- When making connections to the end of the harness, make sure the connections are electrically perfect. Use insulating tape as needed to prevent the entry of water, which results in short circuits and/or corrosion.
- When making new circuits, or modifying circuits already installed, make the cables only just taut enough to remove any slack. Use clips or grommets where required to protect cables from heat or sharp edges.
- Always use rustproof clips and apply vinyl coating to that portion of the clips in direct contact with the harnesses.
- No scotch clips or connectors.
- To minimize the vibration of the harness, clipping points should be set up according to the table below.
- When changing the length of the battery cable, do not cut or splice the existing cable. Make up a new cable of the correct length and wire gauge for the load and distance, without splices.
- When using connectors, use a socket (female) connector on the electrical source side and a plug (male) connector on the electrical load side to lower the possibility of a short circuit when disconnected.
- When connecting cables to moving or vibrating parts such as the engine or transmission, be sure to maintain sufficient slack in the wiring to absorb the vibration. Follow the example of existing cables connected by GM. Keep flexible cables clear of other parts.
- Do not use vinyl tape in the engine compartment. The heat will tend to make it peel off. Use plated steel clips coated with rubber or vinyl.
- When locating auxiliary equipment or lines near the chassis components caution should be used to protect the chassis components from excessive vibration, heat or chemical reactions.
- See the following page for examples of proper harness protection

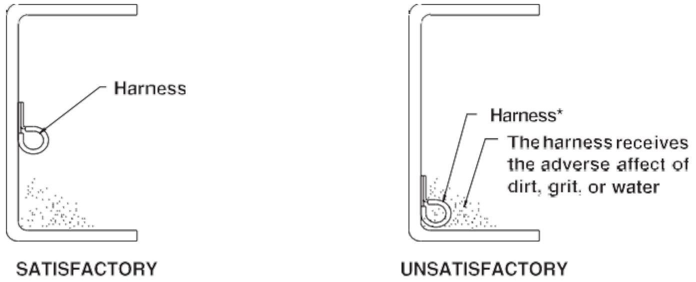
Wiring Harness Clip Distances

Harness Diameter	Clip Distance
less than 0.2 in.	less than 11.8 in.
0.2 in. ~ 0.4 in.	approx. 15.7 in.
0.4 in. ~ 0.8 in.	approx. 19.7 in.


Vinyl tube
Clip
Harness
Direct contact*
SATISFACTORY
UNSATISFACTORY

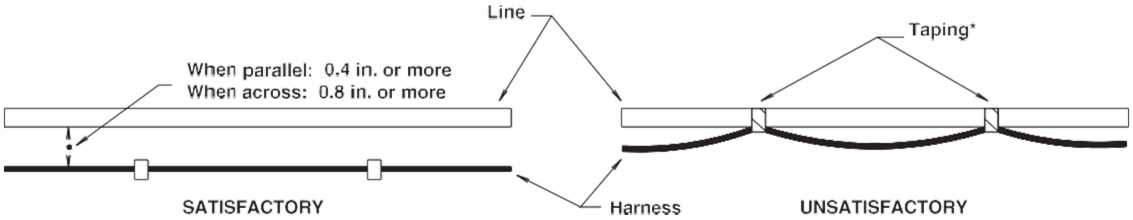

Rubber grommet
Steel plate
Electric wire
SATISFACTORY
UNSATISFACTORY

* Cables should not be in contact with sharp edges or pierced holes.


Harness
Harness*
The harness receives the adverse affect of dirt, grit, or water
SATISFACTORY
UNSATISFACTORY

* Harnesses should not be installed on inside lower face of the chassis frame.

* Harnesses should not be taped to fuel lines or other lines. A sufficient clearance should be maintained between harness and pipe lines.


Line
Taping*
When parallel: 0.4 in. or more
When across: 0.8 in. or more
Harness
SATISFACTORY
UNSATISFACTORY

Wire Color Code

The electrical circuits of the Chevrolet LCF Chassis Cab are connected with low-voltage stranded wire for automotive applications. The color coding standards are as follows for the Chevrolet LCF Chassis Cab:

(1)	Black	B	Starter circuits and grounds	(5)	Yellow	Y	Instrument circuit
(2)	White	W	Generator (alternator) circuit	(6)	Brown	Br	Accessory circuit
(3)	Red	R	Lighting circuit	(7)	Light Green	Lg	Other circuit
(4)	Green	G	Signal circuit	(8)	Blue	L	Windshield wiper motor circuit

Maximum Allowable Current by Wire Size

Harness Design Diameter (mm)	AWG Equivalent	No. of Wires/Wire Diameter (mm)	Cross Sectional Area (mm2)	Maximum Allowable Current (Amps)
100	00	217/0.80	109.1	363
85	0	169/0.80	84.96	305
60	1	127/0.80	63.84	248
50	1	108/0.80	54.29	223
40	1	85/0.80	42.73	191
30	2	70/0.80	35.19	171
20	4	41/0.80	20.61	123
15	6	84/0.45	13.36	93
8	8	50/0.45	7.952	68
5	8	65/0.32	5.228	51
3	12	41/0.32	3.297	39
2	14	26/0.32	2.091	29
1.25	16	16/0.32	1.287	21
0.85	18	11/0.32	0.8846	17
0.5	20	7/0.32	0.5629	13

Reference: The values given in the “maximum allowable current” column are based on the ambient temperature condition of 104^{o}F with temperature increase of 104^{0}F.

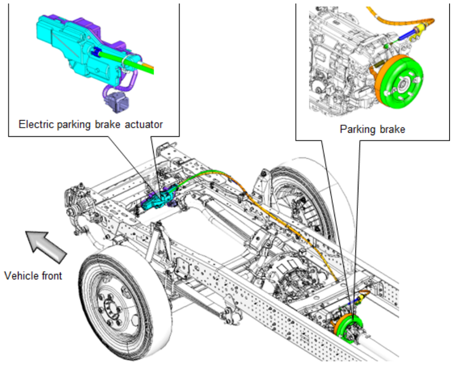
Electronic Parking Brake Release Cable

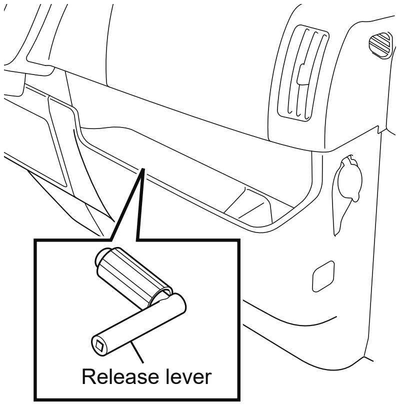
ADVICE

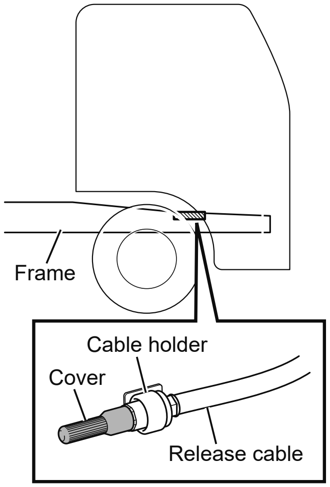
- **A minimum clearance of 1.2 inches should be provided between the electronic parking brake cable and body components.**
- **Be sure to never bend the electronic parking brake release cable.**
- **The electronic parking brake cable may be broken if it is bent or interferes with the body and its fixtures.**

Release Cable

The end of the release cable is located at the right front of the frame. If the electric parking brake cannot be released due to a malfunction of the electric parking brake, etc., it is possible to release the electric parking brake by attaching a tool to the end of the release cable. For the information on how to release the electric parking brake in an emergency, refer to the Owner's Manual.







Rear Lighting

Brackets installed are temporary. Please do not use these brackets for body installation.

Serviceability

ADVICE

- No matter what other modifications or changes are made, access to components requiring daily preventive maintenance or other routine service must not be obstructed. This includes the following items:

1. Inspection, filling and draining of engine oil and cooling water.
2. Inspection, filling and draining of transmission fluid.
3. Adjustment, removal and installation of the fan belts.
4. Inspection, filling and removal of the battery and battery cover.
5. Inspection and filling of brake fluid.
6. Inspection and bleeding of the brake system and servo unit.
7. Maintenance of clearance for tightening of check bolt on brake safety cylinder.
8. Operation of the spare tire carrier, including mounting and dismounting of the spare tire.
9. Adjustment, removal and installation of distributor and/or cover.

Wheelbase Alteration

With certain applications, it may become necessary to alter the wheelbase of the chassis. The following pages provide the suggested guidelines for accomplishing either shortening or lengthening of the wheelbase.

Shortening/Lengthening the Wheelbase Without Altering the Frame

Since the frame is an integral part of the chassis, it is recommended for the frame not be cut if it is avoidable. When shortening or lengthening the wheelbase on some models, it is possible to do so without cutting the frame. This is possible on models which have a straight frame rail. If the chassis does not have a straight frame rail, it may still be necessary to cut the frame. For instructions on shortening or lengthening these chassis, refer to the “Altering the Wheelbase by Altering the Frame” section of this book. Otherwise, the wheelbase may be shortened or lengthened by removing the rear suspension, drilling new suspension mounting holes at the appropriate spot in the frame, and sliding the rear suspension, suspension liner, and suspension crossmembers forward or aft.

The suspension and suspension crossmembers’ rivet holes left in the frame rail flange must be filled with GRADE 8 bolts and hardened steel washers at both the bolt head and nut, HUC bolts or GRADE 8 flanged bolts and hardened steel washers at the nut. When shortening/lengthening the wheelbase in this manner, the following guidelines must be adhered to:

1. All frame drilling must comply with the DRILLING AND WELDING section of this book.
2. All rivet holes left in the frame rail flange from the suspension and suspension crossmembers must be either filled with GRADE 8 bolts and hardened steel washers at both the bolt head and nut, HUC bolts or GRADE 8 flanged bolts and hardened steel washers at the nut.
3. The components required to be slid forward or aft are the suspension and suspension hangers, suspension crossmembers and suspension frame liner.

Altering the Wheelbase by Altering the Frame

Even on a straight frame rail, it may be desirable to cut the frame and lengthen or shorten the wheelbase rather than simply sliding the rear suspension back or forward. The following section offers some guidelines and suggestions for cutting and lengthening or shortening the frame.

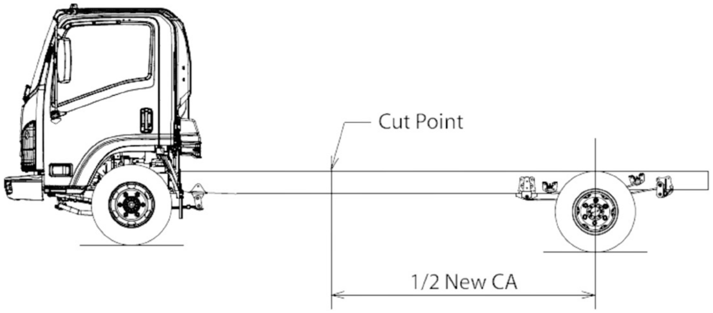
Glossary of Terms – Chassis Wheelbase Alteration

CA – Length from back-of-cab to rear axle centerline in inches.
AL – Added length (in case of a lengthened wheelbase). Difference between WB (new) and WB (old).
SL – Shortened length (in case of shortened wheelbase). Difference between WB (old) and WB (new).

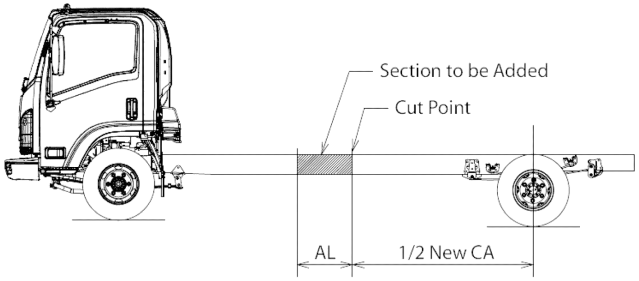
1. Determine the added length (AL) or shortened length (SL) required to lengthen or shorten chassis. (For added wheelbase: New CA = CA + AL; For shortened wheelbase: New CA = CA – SL.)

2. Obtain the material to be used as the insert for the lengthened wheelbase in the correct length (AL). The insert must have the same cross sectional dimensions and yield strength as the original frame rail.

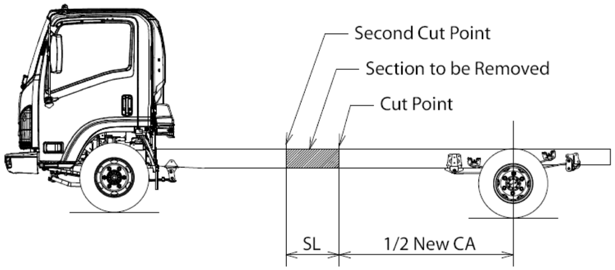
3. Divide the new CA by two (2). Measure new CA/2 from the center of the rear axle forward and mark this point on the chassis frame (see figure below).



4. Cut the chassis frame at this point. If the wheelbase is to be lengthened, addition of the previously obtained insert (of length AL determined in step 1) will be made at this time. If the wheelbase is to be shortened, measure the distance (SL) forward of this cut and remove a length (SL) section from the chassis frame (see figure below). Insure that an adequate area on the frame remains for the required addition of the necessary reinforcements. These are the only suggested places for cutting the frame and reinforcements but may be changed upon the advice of GM upfitter integration team.

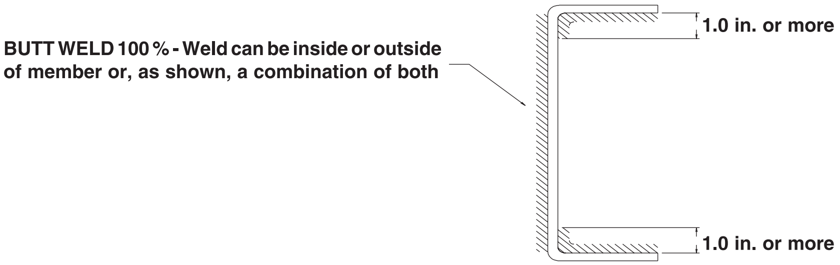


Lengthening the Wheelbase



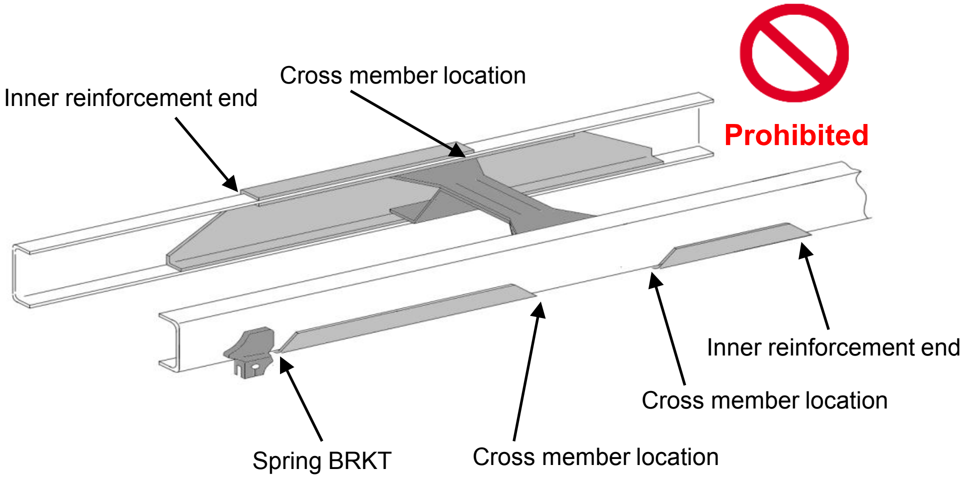
Shortening the Wheelbase

5. When welding the insert (length AL for wheelbase lengthening) to the original frame rail, a continuous butt weld must be used at the splices. When shortening the wheelbase, weld the ends of the chassis frame together with a continuous butt weld over the junction of the frame ends. Weld can be both the inside and outside of the frame rails using welding techniques prescribed by established welding standards (ref. SAE J1147) and in accordance with this guide. An example of this weld is shown below.


BUTT WELD 100 % - Weld can be inside or outside of member or, as shown, a combination of both
1.0 in. or more
1.0 in. or more

Installation position of reinforcement material

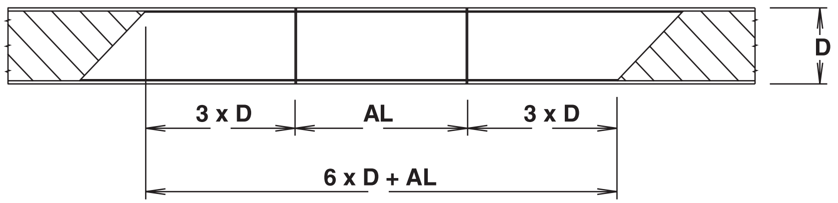
- Ends of outer reinforcement and inner reinforcement should not overlap.
- An end of outer reinforcement and cross member should not overlap.
- An end of outer reinforcement and spring bracket should not overlap.


Prohibited
Inner reinforcement end
Cross member location
Inner reinforcement end
Cross member location
Spring BRKT
Cross member location

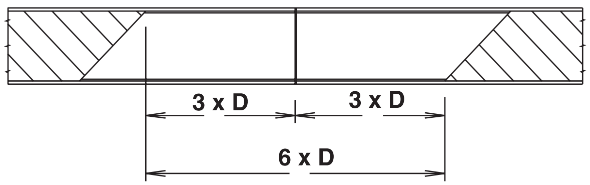
6. Determine the appropriate additional internal reinforcements which are required using this equation:

Reinforcement Length = AL + 6 x (original frame rail web depth).

The figure below shows how this reinforcement is to be placed over the extended or shortened section of the frame rail.



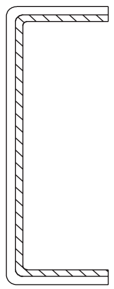
Lengthened Wheelbase



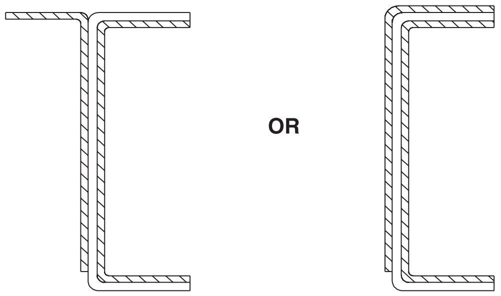
Shortened Wheelbase

D = Original frame rail web depth

The suggested cross section of this reinforcement is a snug fit inner channel. If the new wheelbase exceeds the upper limit of the optional wheelbases of this model, i.e.; a “long bridge”, it may be necessary to use an “inverted L” reinforcement in addition to the snug fit channel reinforcement. Application Engineering should be consulted for approval of such cases. It should be noted that these methods of reinforcements, and any other methods which may be used, require a 45° angled cut at both ends to avoid stress concentrations in the frame (note the figures under item 7).

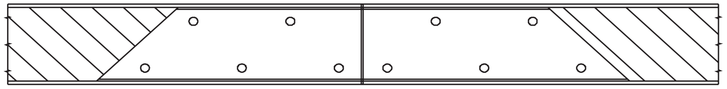


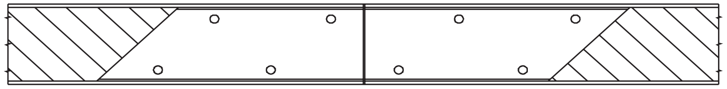
Snug fit inner channel



Snug fit inner channel with "Inverted L" for "Long Bridge" wheelbases

7. The reinforcements must be fastened securely to only the web of the original chassis frame rail. The reinforcement must be held rigidly in place using either HUC bolts, GRADE 8 bolts and hardened steel washers at both the bolt head and nut, or GRADE 8 flanged bolts and hardened steel washers at the nut. Below are some suggested bolt patterns. It should be noted that these bolt patterns must not align the bolts vertically, i.e.: the bolt pattern must be staggered.





8. Lengthening the frame will also require extending the brake lines and basic chassis electrical harness. It is recommended that the original brake lines be removed and replaced with brake lines of the same diameter as the original lines and of the appropriate length. The extended ABS brake lines must be supported back to the frame to prevent vibration. The electrical harness must be replaced with one appropriate for the new wheelbase or extended in accordance with the *Electrical Wiring and Harnessing* section of this book.

    a) Starting with the 25MY LCF **Diese**l, there will no longer be an extension harness. Instead, the entire rear harness will need to be replaced when going to the extended 200" and 212" wheelbase.
        i) 200" WB Rear Harness Part # contact dealership
        ii) 212" WB Rear Harness Part # contact dealership
    b) Starting with the 26MY LCF **Gas**, the Class 5 truck will offer the extended 200" and 212" wheelbases.
        i) 200" & 212" WB Rear Harness Part # contact dealership

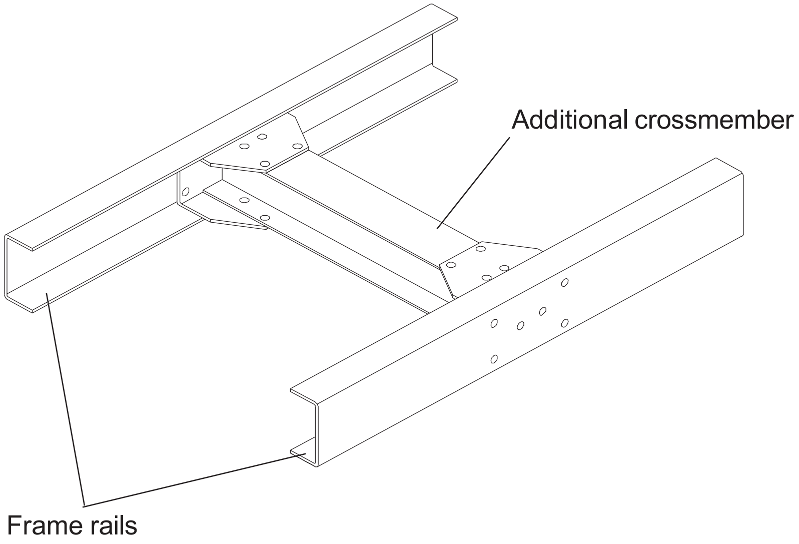
9. The propeller shafts' overall length will also need to be lengthened or shortened. If the extension is within the limits of the optional wheelbases of the respective model, the exact propeller shaft lengths and angles are given on or about Page 12 of the respective sections of this book. If the modified wheelbase exceeds the optional wheelbases of the respective model, the following guidelines must be adhered to:
    a) Propeller Shaft Length - the maximum propeller shaft lengths (pin to pin) for the respective models are shown in the table below.
    b) Propeller Shaft Angles - the maximum propeller shaft angles, with respect to the previous shaft, are shown in the table below.
    c) The propeller shaft angles must be designed such that the angles will cancel to avoid propeller shaft whip.
    d) The propeller shaft yokes must be assembled such that the propeller shaft yokes are "in phase."

	GAS ENGINE				DIESEL ENGINE			
Chassis Model	**3500 HG**	**4500 HG**	**5500 HG**	**5500 XG**	**4500 HD**	**4500 XD**	**5500 XD DR**	**5500 XD**
Propeller Shaft Diameter (in.)	3.25	3.25	3.54	3.54	3.25	3.25	3.54	3.54
Maximum Propeller Shaft Length (in.)	50.7	50.7	54.3	54.3	50.7	50.7	52.9	52.9
Maximum Propeller Shaft Angle (in.)	6.1°	6.1°	6.1°	6.1°	6.1°	6.1°	6.1°	6.1°

10. When extending to the 200" and 212" wheelbases it will need the drop bracket for the driveshaft center bearing.
    a) Part # contact dealership

11. Extending the frame will also require relocation and/or addition of crossmembers. If the extension is within the limits of the optional wheelbases of the respective model, the exact crossmember locations and dimensions are given in the respective model sections of this book. If the modified wheelbase exceeds the optional wheelbases of the respective model, the following guidelines must be adhered to:
    a) The crossmember location will largely be determined by the propeller shaft lengths and where the center carrier bearing locations are for the propeller shaft assembly.
    b) A crossmember must be located at the front and rear spring hangers of the rear suspension (refer to the appropriate section of this book to see where these suspension crossmembers are to be located).

c) The crossmember must be constructed such that it supports both the upper and lower flange on each frame rail (see drawing on next page). A crossmember such as the one shown below may be constructed, or Chevrolet crossmembers may be obtained from your Chevrolet parts dealer.



d) The maximum distance between crossmembers for the respective models is given in the table below.

MODEL	3500 HG	4500 HG	4500 XD	5500 XD
Maximum Distance Between Crossmembers (in.)	35.7	35.7	35.7	35.7

e) The drilling for any additional holes in the frame rails must comply with the DRILLING AND WELDING section of this book.

12. All other aspects of lengthening or shortening the wheelbase must comply with the applicable section of this Body Builder's Guide. For special applications and longer than recommended body lengths, GM Upfitter at www.gmupfitter.com must be consulted.
13. Please contact applications engineering for guidelines on chassis frame modifications when the vehicle is equipped with an anti-lock brake system.

Symbols Used in This Publication

⚠ **WARNING**

- **Failure to follow instructions identified by this symbol may result in death or injury to you and/or other people.**

👍 **ADVICE**

- Failure to follow instructions identified by this symbol could result in damage to your vehicle.

Installation of Body and Special Equipment

Anti-lock Brake System (ABS) & Electronic Stability Control (ESC)

ADVICE

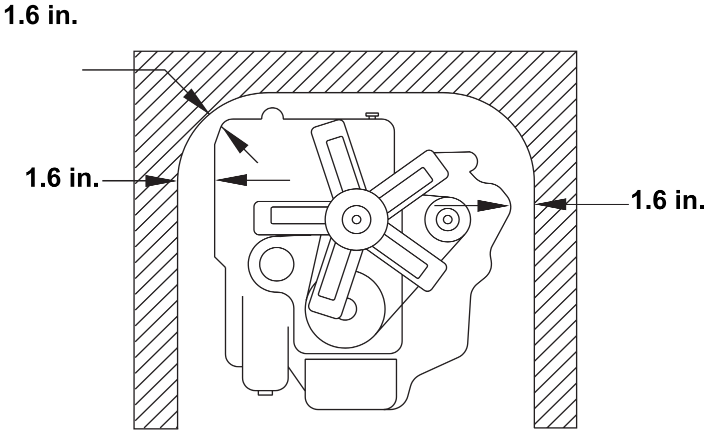
- **Do not relocate or modify the Electro-Hydraulic Control Unit (EHCU).**
- **Do not modify the electrical harness and connector(s) of ABS/ESC systems.**
- **Do not modify the vacuum line(s) inside cab.**
- **Do not use ABS/ESC component wiring to extract power or ground circuits for accessories or added equipment.**
- **Do not relocate or change the installation direction of the yaw rate sensor. The yaw rate sensor's operation is dependent on its position relative to the vehicle's center of gravity as well as the direction of its mounting. Altering the installed location or direction may cause the system to operate incorrectly.**
- **Do not set final gear ratio to anything other than GM factory specification.**
- **The set value of the final gear ratio is programmed into the ABS/ESC control unit. If the final gear ratio is changed, the ABS/ESC systems may not operate correctly.**
- **Do not operate the vehicle with any combination of tires other than GM factory-specified tires. When brakes are applied, the ABS/ESC systems monitor the rotational speed differences of the front and rear tires and rely on a preset value for the tire diameter programmed into the control unit. Using tires that are different from the preset values or using tires that vary greatly in diameter from front to rear, may negatively impact braking performance and cause abnormal operation of the ABS/ESC systems. Contact ICTA/ICTC before equipping any tires other than Chevrolet factory-specified tires.**
- **Do not upfit chassis into a tractor or 5th wheel (Hot Shot) configuration.**
- **Do not route antenna wiring near the main vehicle harness to prevent electrical interference with the ABS/ESC control wires located within the main vehicle harness.**
- **Maintain more than 100 mm (3.94 inches) of clearance with ABS/ESC equipment (e.g. EHCU, speed sensor, yaw rate sensor, steering sensor, etc.) when installing the following types of equipment:**
  1. **Communication radio devices and their antennas.**
  2. **Motors, relays, and other devices that generate electrical noise.**

Calibration is necessary when replacing and/or removing any of the following components (contact an GM dealership for more details):

- Electro-hydraulic control unit and/or yaw rate sensor.
- Steering sensor and/or steering-related components and steering wheel.

Engine

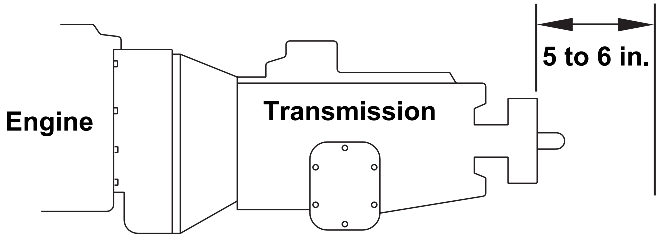
At least 1.6 inches of clearance should be maintained around the engine. At least 1 inch of clearance should be maintained to the front and rear of the engine. No obstacles should be added in front of the radiator or intercooler.

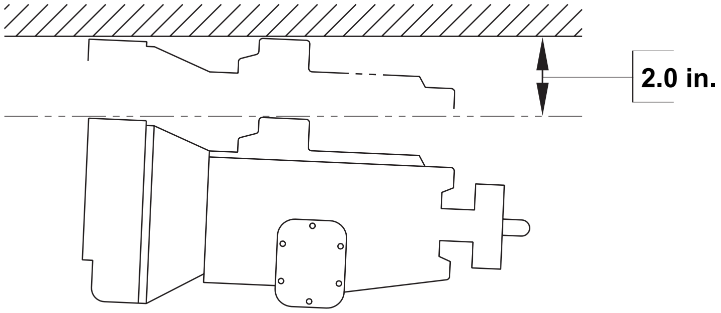


Front and Back Clearance: 1 inch

Transmission

The transmission is removed from the rear. Enough clearance must be provided to allow for rearward movement of the transmission assembly. At least 2 inches of clearance should be maintained above the automatic transmission to allow for transmission removal. At least 1 inch of clearance should be maintained to the front and rear of the transmission. Clearance should be sufficient to allow 5 to 6 inches of unrestricted movement of the transmission assembly. In addition, provide at least 2 inches of clearance around the control lever on the side of the transmission to allow free movement without any binding.

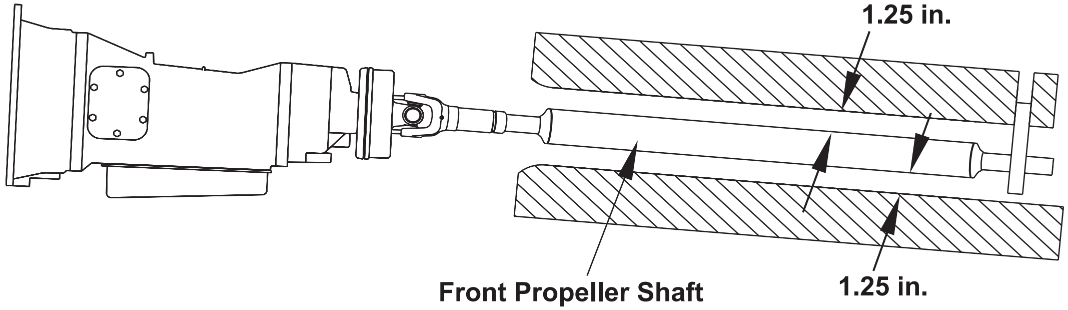




Front and Back Clearance: 1 inch

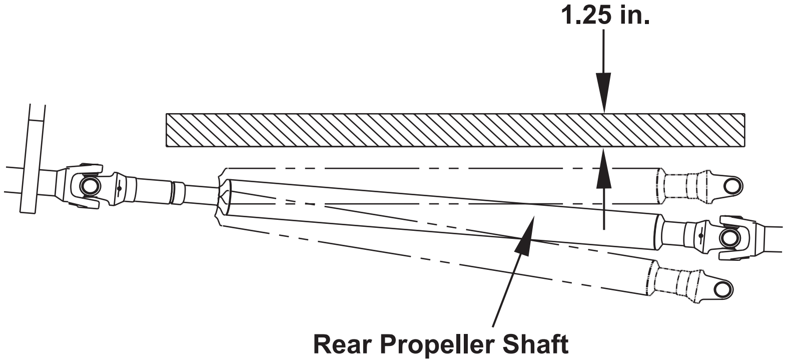
Front and Center Propeller Shafts

At least 1.25 inches of clearance should be maintained around front and center propeller shafts.


1.25 in.
Front Propeller Shaft
1.25 in.

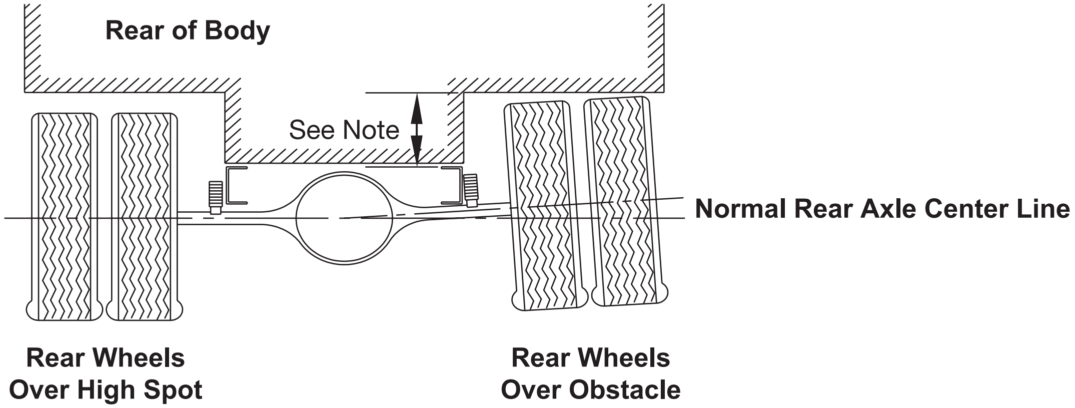
Rear Propeller Shaft

With the rear springs at maximum deflection, at least 1.25 inches of clearance should be provided over the rear propeller shaft.


1.25 in.
Rear Propeller Shaft

Rear Wheel and Axle

The design and installation of the body should allow sufficient clearance for full vertical movement of the rear wheels and axle when the vehicle travels over rough or unleveled surfaces.


Rear of Body
See Note
Normal Rear Axle Center Line
Rear Wheels
Over High Spot
Rear Wheels
Over Obstacle

Note: For recommended clearances, please refer to the Rear Axle Chart in each model's respective section.

Other Clearances

The transmission control cable may be broken if it is bent by or interferes with the body and its fixtures. To prevent this, 1 inch of minimum clearance should be provided. When cable is detached from body mounting, be sure not to bend the cable.

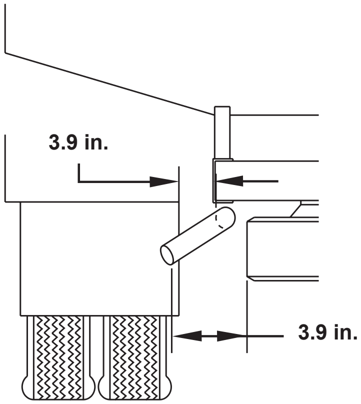
Accessibility to the grease nipple on the rear spring bracket/shackle should be provided so that serviceability with a grease gun is not hampered.

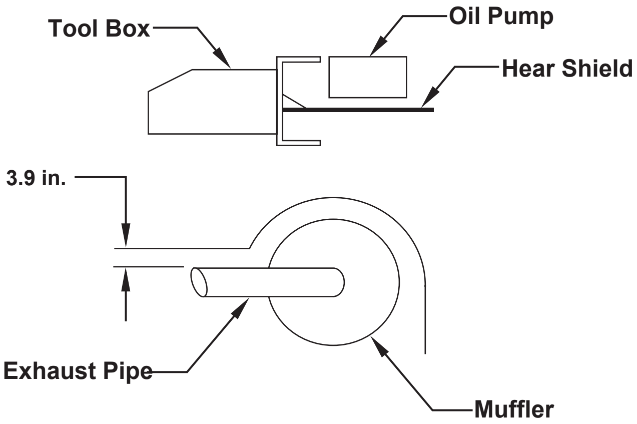
Parts	Location	Minimum Clearance (in)
Brake Hose	Axle Side	6.7
	Frame Side	1.6
Shock Absorber	Axle Side	2.4
	Frame Side	1.2
Parking Brake Cable	-	1.2
Fuel Hose	-	1.6

Exhaust Pipe Clearances

If flammable materials such as wood are used in the body, provide at least 3.9 inches of clearance between the body and any parts of the exhaust pipe, DPF/ SCR Package. If it is impossible to maintain the minimum clearance, use a heat shield. Also use a heat shield if an oil pump or line is located above the exhaust pipe, muffler or catalytic converter.

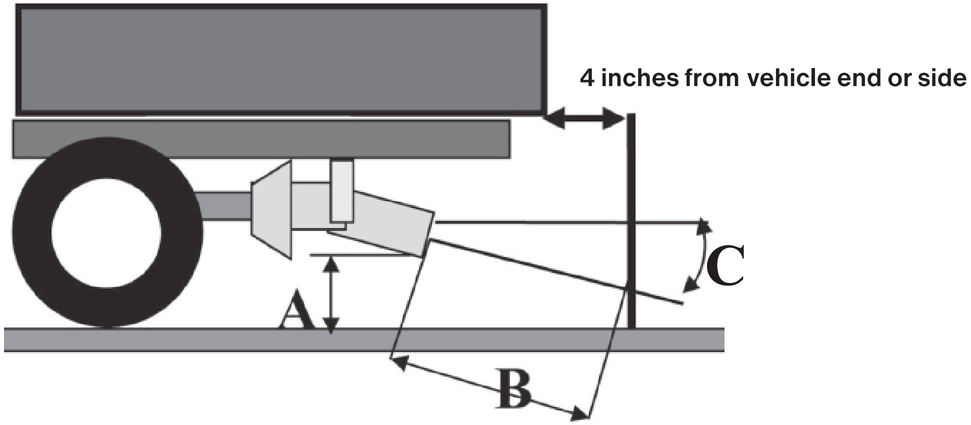
1. Clearances around SCR system components must be greater than 1.0 inch at all times to avoid potential contact between the body and the exhaust components. The 1.0 inch allows for thermal expansion and assembly tolerance of the exhaust system. It does not account for dynamic movement in the body due to road conditions and other loads. Body companies are instructed to adjust this 1.0 inch clearance as required to account for body displacement while driving. This guidance does not supersede guidance or exhaust clearances for temperature sensitive or flammable components.
2. Exhaust temperatures have not changed since the introduction of DPF in 2007.





Exhaust Heat Clearances

During the DPF regeneration cycle, exhaust gas temperatures are hot. Therefore, care should be exercised in placement of the pipe's end location and angle. Do not locate any body components or equipment around the exhaust pipe's end area.



Dimension	Clearance
A	8 in. (minimum)
B	18 in. (minimum)
C	45 deg. (maximum)

Exhaust System

The exhaust system has a crucial role in meeting 2010 EPA regulations. In order to maintain compliance with the 2010 EPA emissions levels the Diesel Particulate Filter (DPF) and SCR package must not be moved. The distance between the engine exhaust manifold down pipe and Diesel Particulate Filter (DPF) / Selective Catalytic Reduction Package (SCR) must be maintained and the pressure in the system must be sustained at a constant level. Due to increased temperatures in the exhaust system during the regeneration cycle and the heat stress caused by these temperatures, body builders should closely evaluate the placement of equipment and provide protection to these added components as needed.

Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR) Restrictions

1. The DPF/SCR has exhaust pressure pipes and temperature sensors. Care must be taken when a body is installed so as to not damage pipe sensors.
2. The DPF/SCR should be free from impact or vibration during body installation.
3. The DPF/SCR must have enough room for disassembly of the unit for service and cleaning.
4. The DPF/SCR switch in the cab should not be removed or disabled. No modification or relocation of the DPF/SCR unit, pressure pipes, and sensor is permitted.

Exhaust System Modification

Modification of the exhaust system should be avoided. If modifications are absolutely necessary, the following points should be maintained.

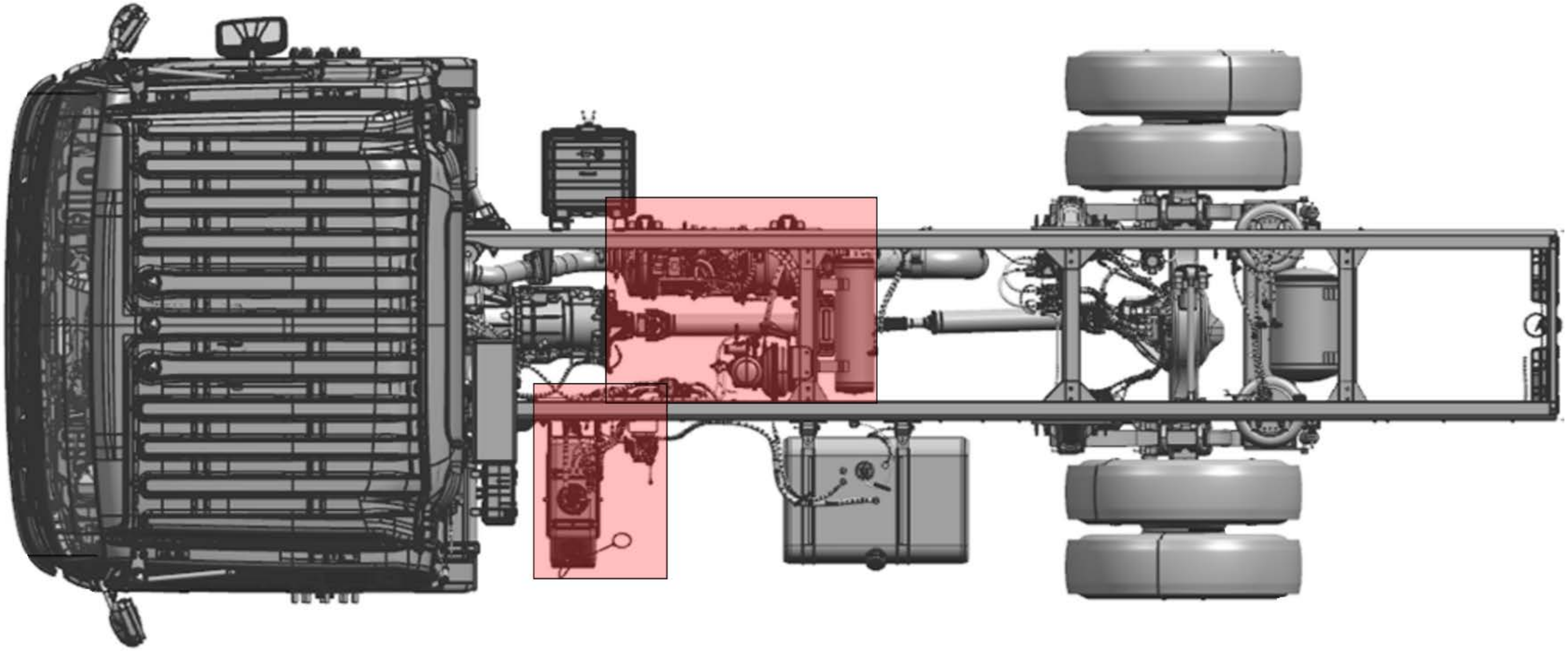
1. Maintain the clearance specified in the table below between all parts of the exhaust system and any fuel lines, brake lines, brake hoses, electrical cables, etc. The exhaust outlet should not point toward any of these parts.

Component	Clearance Dimension
Brake Lines	2.4 in. or more. If the combined section of a group of parallel brake lines is more than 7.8 in., a clearance of 7 in. or more should be provided.
Flexible Brake Hoses	7.8 in. or more. The temperature of flexible brake hoses should not exceed 158°F. If the highest temperature is not measurable, a clearance of more than 15.7 in. should be maintained between the hoses and the exhaust system.
Wiring Harnesses and Cables	7.8 in. minimum and prevent temperatures more than 158°F. If maximum temperature cannot be measured, provide a minimum clearance of 15.7 in..
Steel Fuel Lines	3.1 in. or more.
Rubber or Vinyl Fuel Hoses	5.9 in. or more.

2. If a tool box is installed, it should preferably be made from steel. If a wooden tool box is installed, at least 7.8 inches of clearance should be maintained between the tool box and any parts of the exhaust system.
3. If the exhaust system is modified, it is the responsibility of those making the modification to ensure that the noise level meets appropriate standards.
4. If the exhaust system is modified it is the responsibility of those making the modification to ensure that the emission levels meet appropriate standards.
5. Exhaust system component temperatures are sufficient to ignite flammable materials; efforts should be made to prevent flammable materials from interacting with the exhaust system.

6500 & 7500 No Modification Zones

The DPF/SCR unit **CANNOT** be modified or moved. The DEF tank and pump **CANNOT** be modified or removed. DEF lines and coolant lines **CANNOT** be modified or rerouted.



Body Installation

Mirrors

The Chevrolet LCF chassis will accommodate up to 96 inch wide bodies without modification to the mirror brackets.

⚠ WARNING

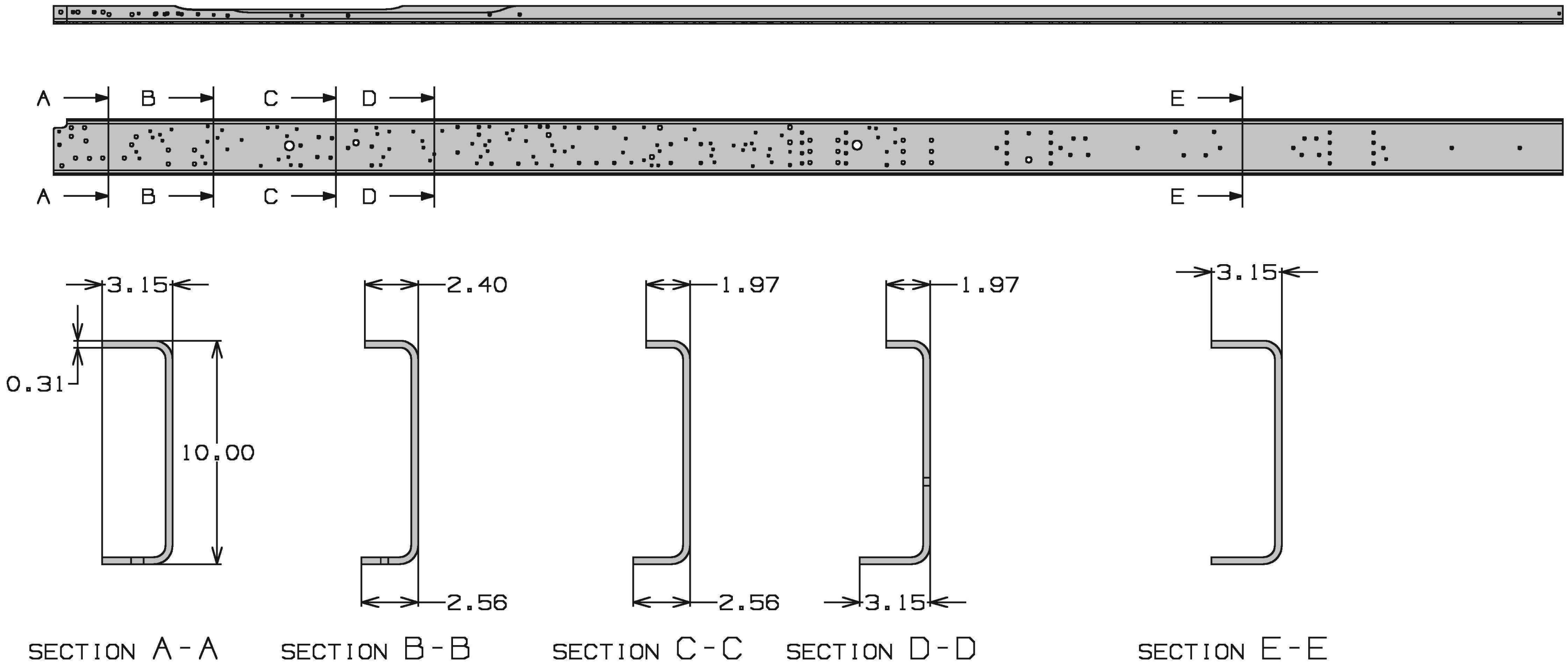
- **Bodies wider than 96 inches and up to 102 inches wide will require modified mirror brackets. This modification can be made at the port and the vehicle order/label will indicate a Regular Product Option (RPO) of I4Q, I5Q or I6Q indicating "Mirror Bracket for 102 wide body". The brackets can also be modified by the GM dealership or the Body Company by installing mirror brackets ordered from GM dealership.**

Special Equipment on the Chassis

When installing special equipment on the chassis, extra consideration must be given to the weight and construction of the equipment to assure proper distribution of the load. Localization of the load should be prevented. All special equipment should be properly secured into position. We recommend the use of subframe members when installing special equipment.

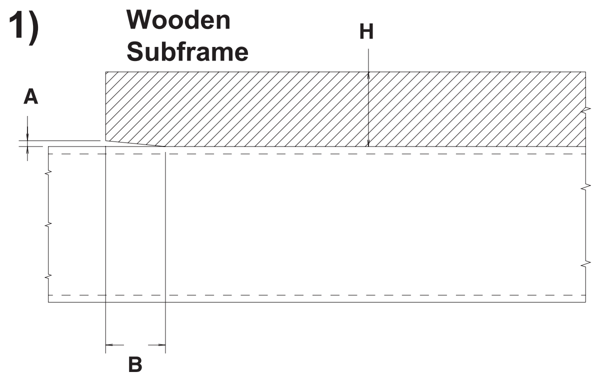
Subframe Design and Mounting

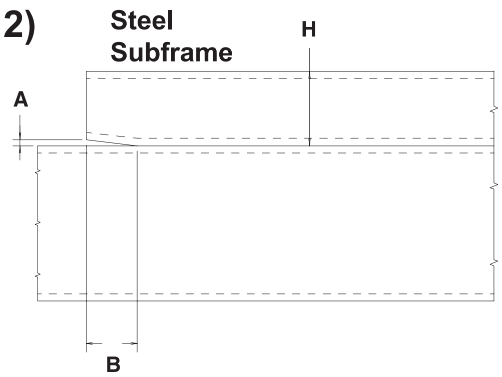
The sub frame assembly should be mounted as close to the cab as possible. It should be contoured to match the shape and dimensions of the chassis frame as closely as possible. See model specification sections for frame and crossmember layout.

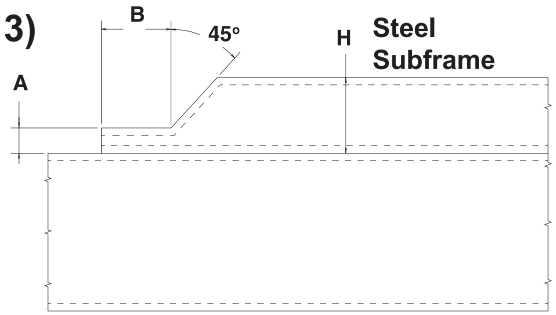


Subframe Contour

Contouring of the front end of the subframe members as shown in the three illustrations below will prevent stresses from being concentrated on certain areas of the chassis frame.

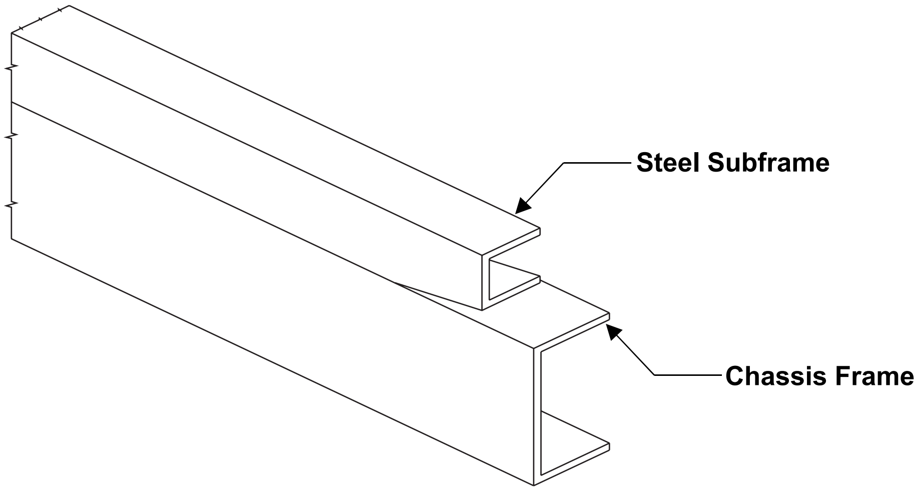

1)
Wooden Subframe
H
A
B


2)
Steel Subframe
H
A
B


3)
B
45°
H
Steel Subframe
A

Drawing	A	B
1)	0.2 in.	$\frac{H}{2} \cong H$
2)	0.2 in.	H or greater
3)	$\frac{H}{3}$	H or greater

When using a steel subframe, do not close off the end of the subframe.


Steel Subframe
Chassis Frame

Prohibited Attachment Areas

Do not attach the subframe to the chassis frame with a bolt or bracket at the points indicated in the following illustrations.

1. At the front end of the subframe. The attaching bolt or bracket must be at least 2 inches behind the kick up point of the subframe (Figure 1).
2. Within 8 inches of bends in the chassis frame or the attachment points of any crossmembers (Figure 2).

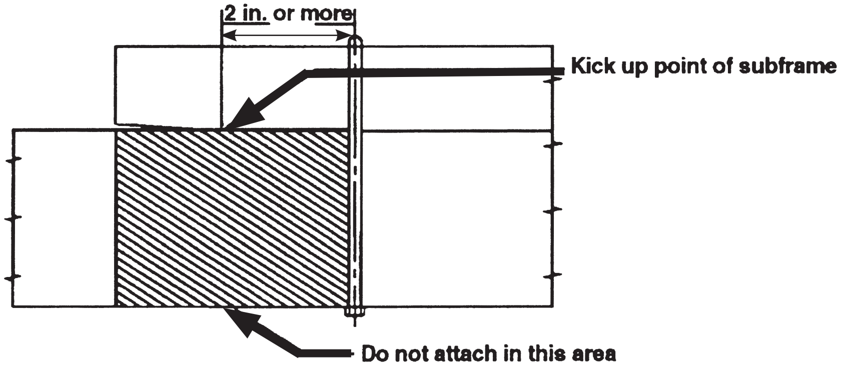

2 in. or more
Kick up point of subframe
Do not attach in this area

Figure 1

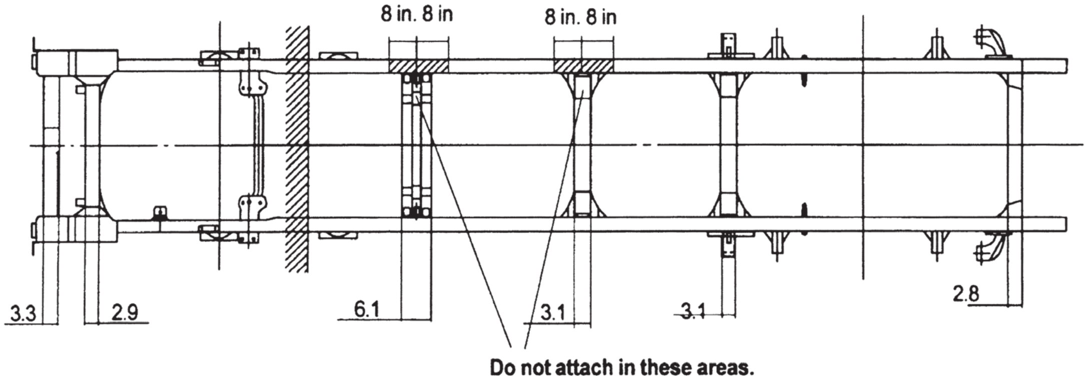
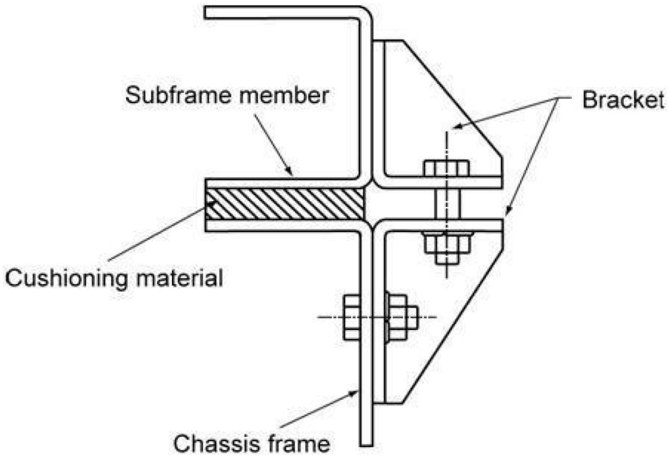
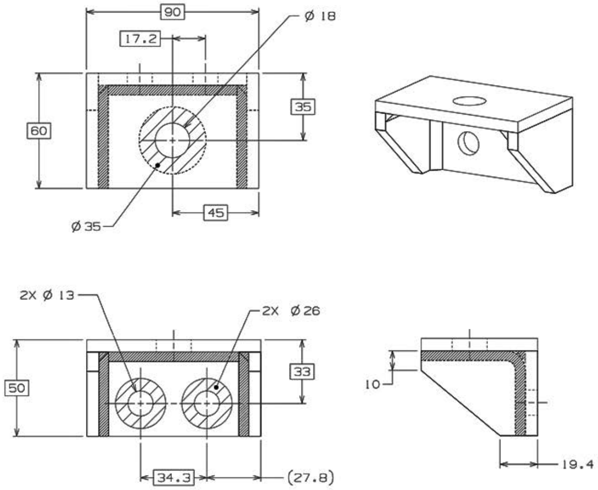

8 in. 8 in
8 in. 8 in
3.3
2.9
6.1
3.1
3.1
2.8
Do not attach in these areas.

Figure 2

Subframe Mounting - Bracket Installation

Mounting brackets should be clamped to the chassis frame using bolts. For proper positions in which to install the bolts, refer to the preceding section and the section "Modifications to the Chassis Frame." In addition to the illustrated bracket and U-bolts a shear plate may be required for adequately body mounting. The body company will be responsible for engineering their own mounting system.

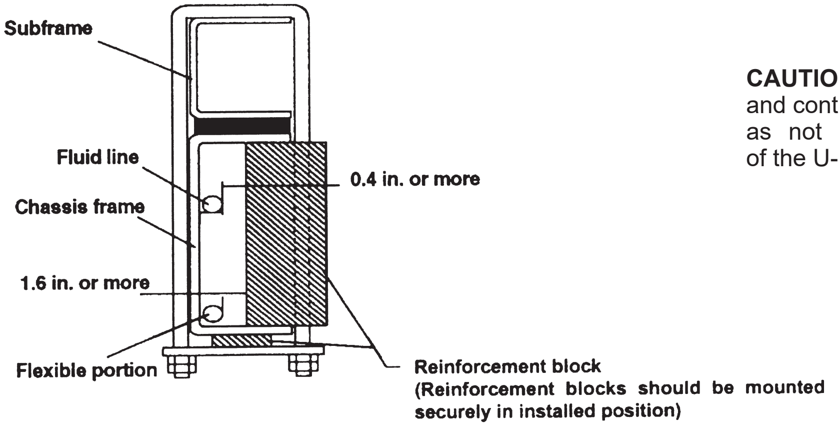

Subframe member
Bracket
Cushioning material
Chassis frame


90
17.2
Ø 18
35
60
Ø 35
45
2X Ø 13
2X Ø 26
50
33
10
34.3
(27.8)
19.4

Note: (3) Body mounting brackets are bolted to the frame from the factory, and they will be painted "YELLOW" of easy identification

U-bolt Installation

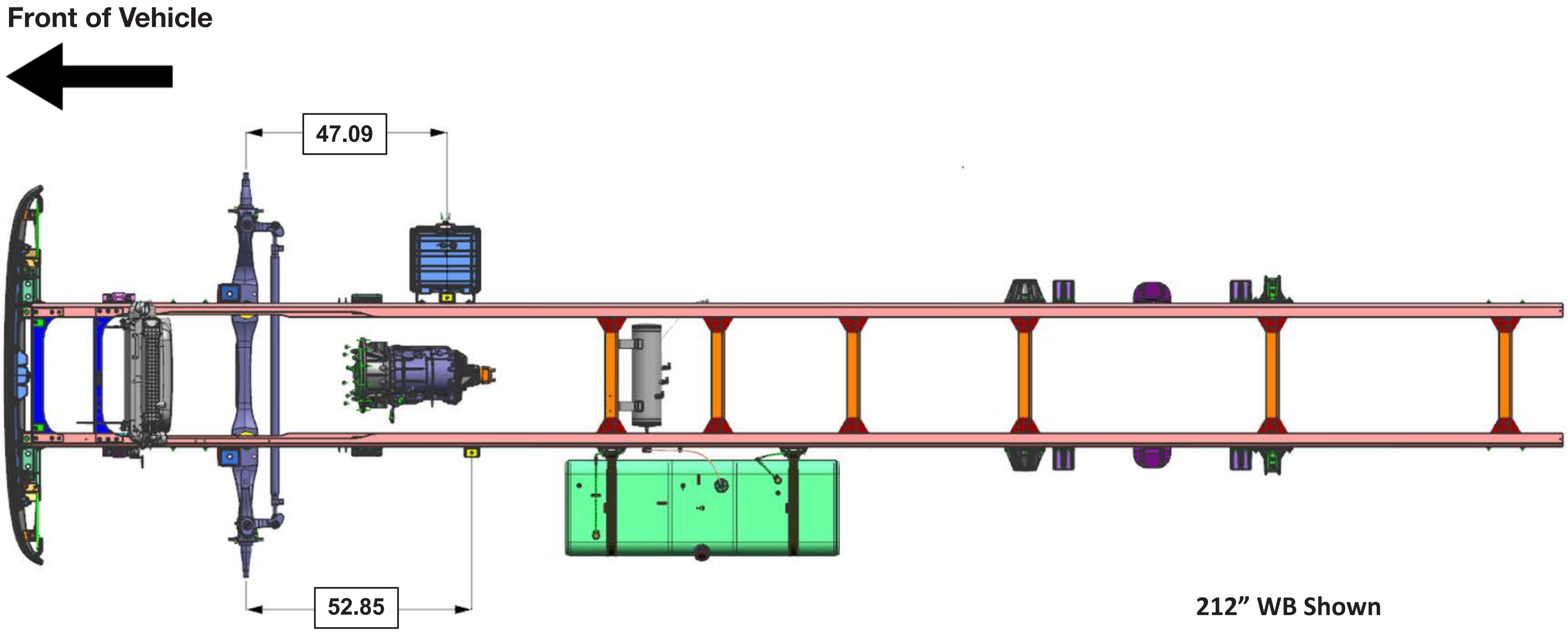
When U-bolts are used to retain the subframe, reinforcement blocks must be installed in the frame members. This will prevent distortion of the frame flange as they are tightened. The drawing indicates the correct placement of reinforcement blocks. If you use wood blocks, be sure that there is sufficient clearance between them and any parts of the exhaust system. If any fluid lines or electric cables are located near the reinforcement blocks, you must provide at least 0.4 inches of clearance between rigid or stationary portions, and at least 1.6 inches between movable or flexible portions of the lines.


Subframe
Fluid line
0.4 in. or more
Chassis frame
1.6 in. or more
Flexible portion
Reinforcement block
(Reinforcement blocks should be mounted securely in installed position)

CAUTION: U-Bolt placement is critical with new emission systems and controls. Extra care must be taken when placing bodies on chassis so as not to damage these components. For the installation positions of the U-bolts, refer to "Prohibited Attachment Areas."

Front Body Mounting Brackets and Crush Block Mounting Locations

Due to the location of the after treatment device and other interior frame components, if body mounting is required in the area directly behind the cab, the supplied body mounting blocks provided on the chassis should be used. The chassis will be supplied with two (2) body mounting blocks (painted yellow) attached to the frame in the locations shown in the figure below. Body Builders will be required to design a mating bracket for attaching the body to the yellow painted chassis body mounting brackets. No U-bolt type attaching is allowed in these locations.



Modification of the Frame

Modifications of the chassis frame should be held to an absolute minimum. Modification work should be performed according to the instructions in the following paragraphs. When modification is complete, chassis frame members should be carefully inspected to eliminate the possibility of any safety-related defects.

NOTE: PLEASE REFER TO NOTES ON CHASSIS FRAME MODIFICATION WITH ANTILOCK BRAKES.

Working on Chassis frame

The chassis frame is designed and built with consideration for proper load distribution. Sufficient physical strength is provided when the load is evenly distributed. Installation of special equipment on the chassis frame can cause variations in load distribution. If even distribution of load is not kept in mind when the equipment is installed, localization of stresses on specific areas of the frame could cause cracking of the chassis frame members or other problems, even if the total weight of the equipment is within the design limit. The chassis frame is designed as an integral unit. Therefore, we do not recommend cutting the chassis frame under any circumstances.

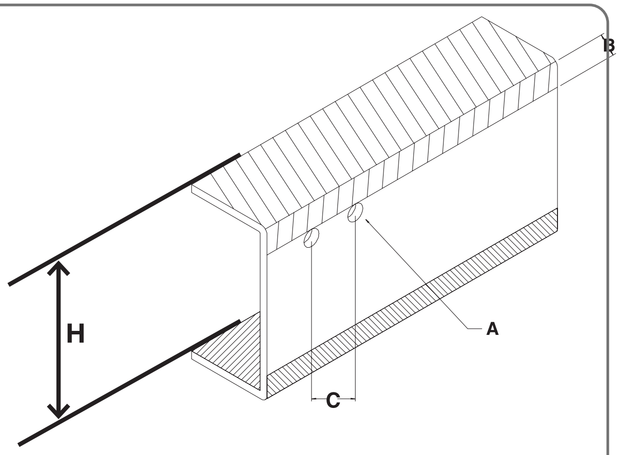
Drilling and Welding

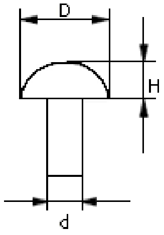
WARNING

- **For vehicles equipped with electronic engines and or electronic or hydra-matic transmissions, electric arc welding must be done with the negative battery cable disconnected.**

ADVICE

1. Do not drill or weld in the shaded portions of the chassis frame members (see below). Do not weld within 0.8 inches from the edges of any existing holes.
2. Hold the length of any welding beads within 1.2-2.0 inches. Allow at least 1.57 inches between adjacent welding beads.
3. All holes must be drilled. Do not use a torch to make any holes.
4. All riveting must be done with cold rivets. Do not use hot rivets.
5. The flange of the chassis frame must not be cut under any circumstances.
6. The subframe must be attached to the chassis frame with bolts. Do not weld.
7. Repaint exposed metal after drilling.





Rivet size detail:
D - 18mm (medium duty truck) / 21mm (heavy duty truck)
d - 11mm (medium duty truck) / 13mm (heavy duty truck)
H - 7.7mm (medium duty truck) / 11mm (heavy duty truck)

Dimensions:
A - no more than 0.59 inches in diameter
B - must be more than H/5 for welding and H/7 for holes
C - must be more than 1.57 inches
H = Frame Height

Figure 3

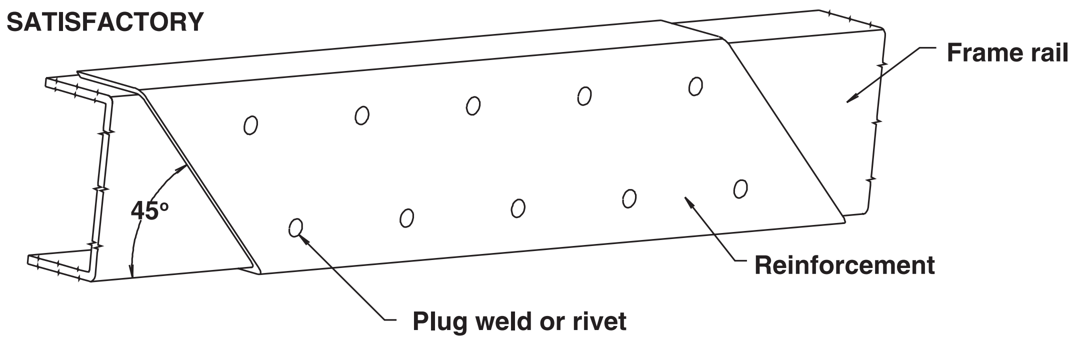
Reinforcement of Chassis Frame

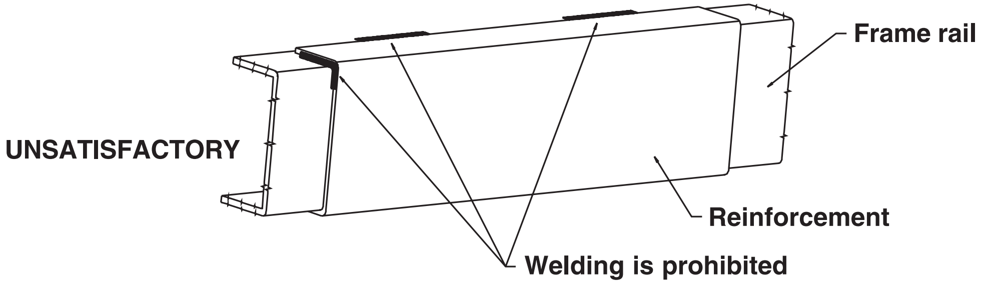
Reinforcements must be installed to prevent the considerable variation in the section modulus. They must be welded so as to avoid localized stresses. The drawing below illustrates the correct and incorrect methods of frame reinforcement.

Welding

Keep reinforcement plates and chassis frame free from moisture and water. Avoid cooling with water after welding. Use a suitable means to protect pipes, wires, rubber parts, leaf springs, etc. against heat and effect of sputtering. Remove fuel tank assembly when welding portions near the fuel tank. Remove coat of paint completely when welding painted areas. Repaint exposed metal after welding.

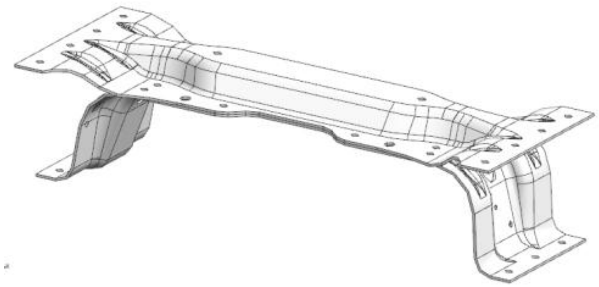
When installing reinforcement by riveting or plug welding, place plugs or rivets in a zigzag pattern. When performing plug welding, be sure that electrical components, such as electric harnesses on the inner side of a chassis frame side member, are a minimum of 50mm apart from welding site. When inserting a rivet in a hole from which another rivet has previously been removed, the rivet should be 1 or 2mm larger in diameter than the removed one. Cold rivet only.



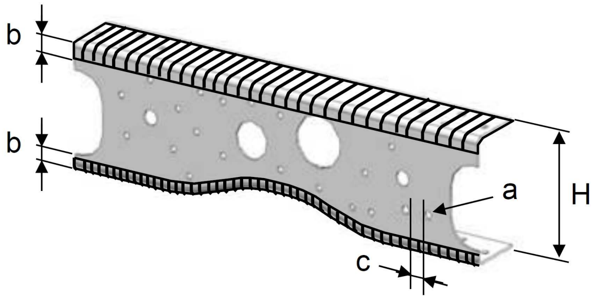


Crossmember Modification

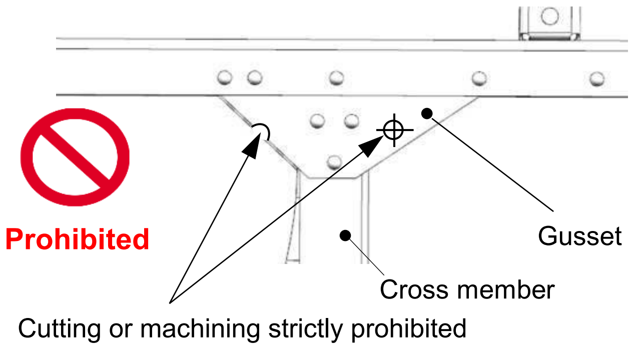
Alligator type cross member - For alligator type, hole drilling, notch making, and welding are prohibited.



Channel type cross member: a – Allowable maximum hole diameter is 9mm, and this hole should be used only for piping or harness routing.
b – Prohibited area, no drilling should be done in this area.
c – See Figure 3 for minimum required distance.



Gusset: Hole drilling and notch making are prohibited.

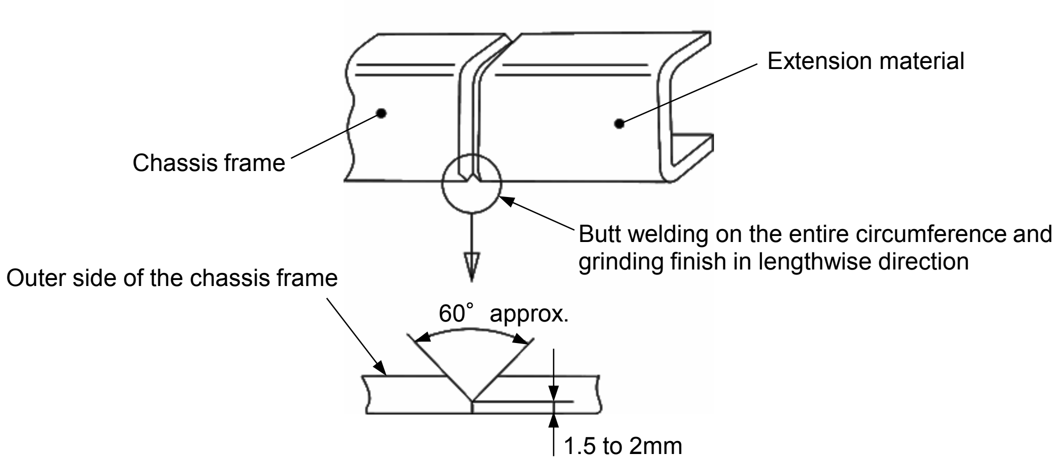

Prohibited
Gusset
Cross member
Cutting or machining strictly prohibited

Rear Overhang Modification

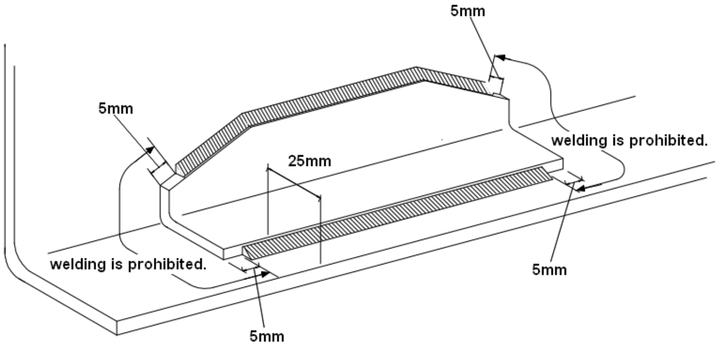
If a body protrudes outward from the rear end of the chassis frame by 300 mm (11.8 in.) or more, lengthen the rear overhang of the chassis frame as indicated below. If it is necessary to cut the chassis frame, ensure that the cut location does not split existing holes.

1. Extension material
    - The extension material should be equivalent to that of side members. Refer to specification information for the vehicle model in consideration.
    - Thickness and bending radius of the extension material should be the same as that of side members. Refer to specification information for the vehicle model in consideration.

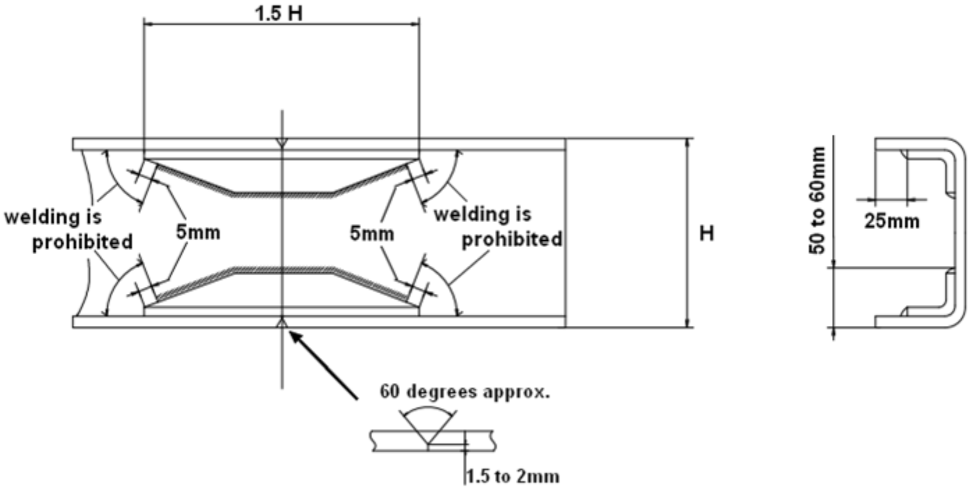
2. Installing extension material
    - **Extension material is 300mm or shorter:** Join extension material and chassis frame with a continuous butt weld around the entire circumference. After welding, grind finish weld surface.


Extension material
Chassis frame
Butt welding on the entire circumference and grinding finish in lengthwise direction
Outer side of the chassis frame
60° approx.
1.5 to 2mm

- **Extension material is longer than 300mm:** Join extension material and chassis frame with a continuous butt weld around the entire circumference, and then fit a reinforcement on the inner side of the chassis frame and extension material.


5mm
5mm
25mm
welding is prohibited.
welding is prohibited.
5mm
5mm

Side member thickness [mm]	Reinforcement material thickness (recommendation value) [mm]
8.0 at minimum	7.0
7.5	5.5 to 7.0
7.0	4.5 to 6.0
4.0 to 6.0	4.5


1.5 H
welding is prohibited
5mm
5mm
welding is prohibited
H
50 to 60mm
25mm
60 degrees approx.
1.5 to 2mm

Fluid Lines

Do not disturb the layout of any brake lines or fuel lines unless absolutely necessary. When modification is needed, follow the instructions below carefully to ensure safety. Brake fluid lines must not be cut and spliced under any circumstances. We do not recommend the cutting or splicing of any fuel lines, but if it is absolutely necessary, be sure that the correct fitting and tools are used to form the joint, and then pressure test the joint. Steel lines are metric sizes.

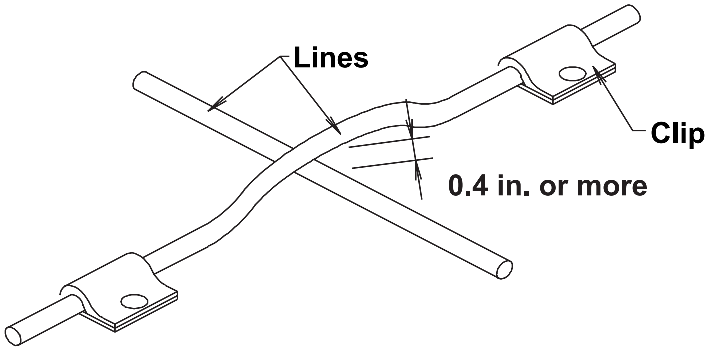
Preparation of Additional Lines

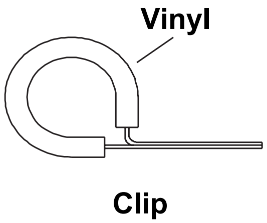
1. Where possible, use only genuine Chevrolet lines as supplied by authorized Chevrolet dealers.
2. Use the correct metric flaring and bending tools to form the lines.
3. Avoid repeated bending. Do not use heat for flaring and bending the lines. Before and after forming the new lines, examine them carefully for scratches, distortion, dents and the presence of any foreign matter.

Installation of Additional Lines

Install new lines away from adjacent parts and away from any sources of heat.

1. A minimum clearance of 0.4 inches must be maintained between lines. Where necessary, clip the lines into position in order to maintain this minimum clearance.
2. Minimize any crossing between lines. If a crossing is unavoidable, use the following procedure:
    a. At least 0.4 inches of clearance should be maintained between lines at the crossing point.
    b. If the 0.4 inches of clearance cannot be maintained, or if the lines are subject to vibration, clip them securely.
3. Plan the bends and clipping points of the lines to minimize vibration and the resulting fatigue.
4. Use rust-proofed clips and apply vinyl coating to the portions of the lines to be clipped.
5. Install new lines in positions where they are protected against water, dirt, grit, sand, rocks and other foreign matter that can come from above or below, or can be flung up by the wheels.





Electrical System Modifications

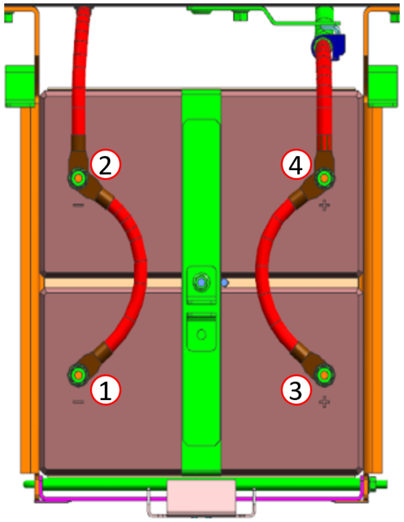
WARNING

- **Before servicing any electrical component, the ignition key must be in the LOCK position and all electrical loads must be OFF, unless instructed otherwise in Chevrolet service procedures. If a tool or equipment could easily come in contact with a live exposed electrical terminal, also disconnect the negative battery cable. Do not disconnect cable within 3 minutes after turning the ignition key to the Lock position. Failure to follow these precautions may cause personal injury and/or damage to the vehicle or its components.**

ADVICE

- Modifications/add-on wiring must be carefully reviewed to ensure compatibility with the base vehicle wiring by reviewing system schematics, wire routing paths, harness connections, etc.
- Due to the wide range of modifications that may be required for vocational needs, it is not feasible for the O.E.M. to take into account all potential revisions. For this reason, any person modifying existing vehicle wiring must assume responsibility that the revisions have not degraded the electrical system performance.
- Any add-on wiring needs to be properly fused and routed to prevent cut, pinch, and chafe problems, as well as avoid exposure to excessive heat.
- Care must be exercised that existing vehicle interfaces do not have their current load capabilities exceeded, and that the respective control devices are not overloaded.
- Added wire size should be at least as large as the wire to which it is attaching in order for fuse protection to be maintained.
- Electrical wiring components can be obtained through your authorized GM dealers.

Battery Terminal Tightening Torque



No.	NUT SIZE	TORQUE
① ~ ④	3/8-16 (inch)	15±2 (N·m)

Electrical Wiring and Harnessing

To increase the reliability of the wiring, all frame harnesses are covered with corrugated vinyl tubing. The following instructions apply to extending or modifying these harnesses. See the Electrical Section for information on commonly used circuits.

Wiring

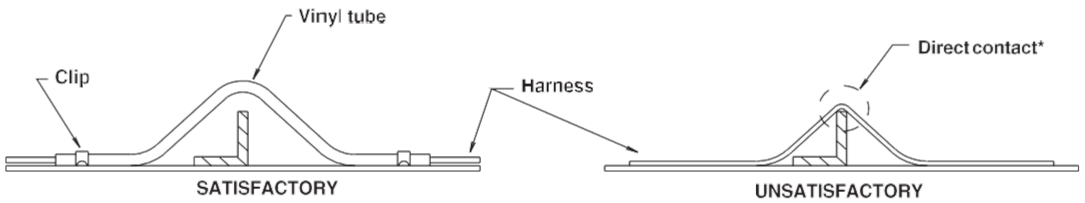
ADVICE

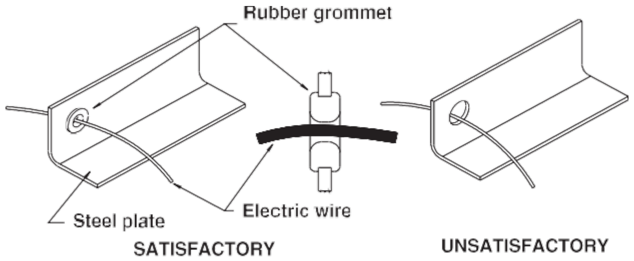
- Most wiring connections on GM vehicles are made with terminals. We recommend the use of terminals when splicing cables and wires.
- When splicing, use new wire of the same gauge, and do not make splices inside the corrugated tubing.
- When making connections to the end of the harness, make sure the connections are electrically perfect. Use insulating tape as needed to prevent the entry of water, which results in short circuits and/or corrosion.
- When making new circuits, or modifying circuits already installed, make the cables only just taut enough to remove any slack. Use clips or grommets where required to protect cables from heat or sharp edges.
- Always use rustproof clips and apply vinyl coating to that portion of the clips in direct contact with the harnesses.
- No scotch clips or connectors.
- To minimize the vibration of the harness, clipping points should be set up according to the table below.
- When changing the length of the battery cable, do not cut or splice the existing cable. Make up a new cable of the correct length and wire gauge for the load and distance, without splices.
- When using connectors, use a socket (female) connector on the electrical source side and a plug (male) connector on the electrical load side to lower the possibility of a short circuit when disconnected.
- When connecting cables to moving or vibrating parts such as the engine or transmission, be sure to maintain sufficient slack in the wiring to absorb the vibration. Follow the example of existing cables connected by Chevrolet. Keep flexible cables clear of other parts.
- Do not use vinyl tape in the engine compartment. The heat will tend to make it peel off. Use plated steel clips coated with rubber or vinyl.
- When locating auxiliary equipment or lines near the chassis components caution should be used to protect the chassis components from excessive vibration, heat or chemical reactions.
- See the following page for examples of proper harness protection

Wiring Harness Clip Distances

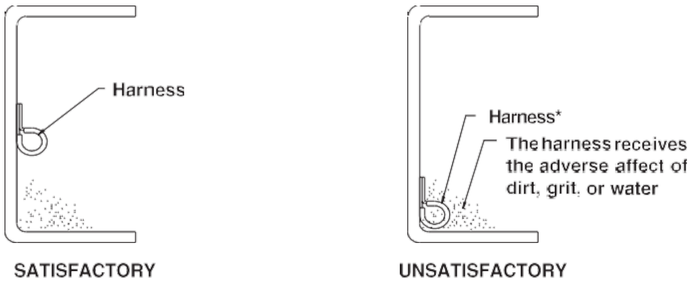
Harness Diameter	Clip Distance
less than 0.2 in.	less than 11.8 in.
0.2 in. ~ 0.4 in.	approx. 15.7 in.
0.4 in. ~ 0.8 in.	approx. 19.7 in.

Wiring Harness Detail


Vinyl tube
Clip
Harness
Direct contact*
SATISFACTORY
UNSATISFACTORY

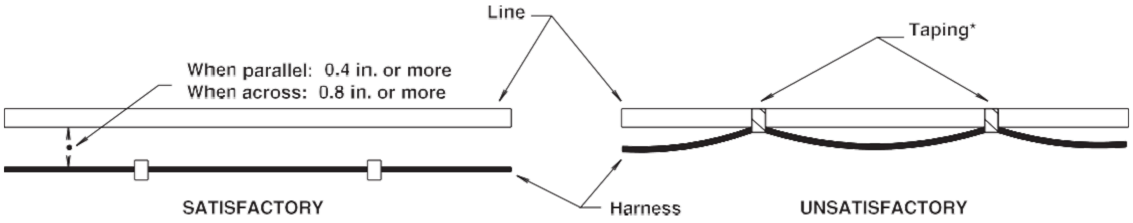

Rubber grommet
Electric wire
Steel plate
SATISFACTORY
UNSATISFACTORY

* Cables should not be in contact with sharp edges or pierced holes.


Harness
Harness*
The harness receives the adverse affect of dirt, grit, or water
SATISFACTORY
UNSATISFACTORY

* Harnesses should not be installed on inside lower face of the chassis frame.

* Harnesses should not be taped to fuel lines or other lines. A sufficient clearance should be maintained between harness and pipe lines.


Line
Taping*
When parallel: 0.4 in. or more
When across: 0.8 in. or more
Harness
SATISFACTORY
UNSATISFACTORY

Wire Color Code

The electrical circuits of the Chevrolet LCF Chassis Cab are connected with low-voltage stranded wire for automotive applications. The color coding standards are as follows for the Chevrolet LCF Chassis Cab:

(1)	Black	B	Starter circuits and grounds
(2)	White	W	Generator (alternator) circuit
(3)	Red	R	Lighting circuit
(4)	Green	G	Signal circuit
(5)	Yellow	Y	Instrument circuit
(6)	Brown	Br	Accessory circuit
(7)	Light Green	Lg	Other circuit
(8)	Blue	L	Windshield wiper motor circuit

Maximum Allowable Current by Wire Size

Harness Design Diameter (mm)	AWG Equivalent	No. of Wires/Wire Diameter (mm)	Cross Sectional Area (mm2)	Maximum Allowable Current (Amps)
100	00	217/0.80	109.1	363
85	0	169/0.80	84.96	305
60	1	127/0.80	63.84	248
50	1	108/0.80	54.29	223
40	1	85/0.80	42.73	191
30	2	70/0.80	35.19	171
20	4	41/0.80	20.61	123
15	6	84/0.45	13.36	93
8	8	50/0.45	7.952	68
5	8	65/0.32	5.228	51
3	12	41/0.32	3.297	39
2	14	26/0.32	2.091	29
1.25	16	16/0.32	1.287	21
0.85	18	11/0.32	0.8846	17
0.5	20	7/0.32	0.5629	13

Reference: The values given in the “maximum allowable current” column are based on the ambient temperature condition of 104^{o}F with temperature increase of 104^{0}F.

Fuel System

Relocation of the fuel tank, or installation of additional fuel tanks, is not recommended. If modifications to the fuel system are unavoidable, follow these recommendations:

1. Maintain adequate clearance between the fuel tank and any other device or structure.
2. Do not connect any additional fuel hose.

Rear Lighting

Brackets installed are temporary. Please do not use these brackets for body installation.

Serviceability

ADVICE

- No matter what other modifications or changes are made, access to components requiring daily preventive maintenance or other routine service must not be obstructed. This includes the following items:

1. Inspection, filling and draining of engine oil and cooling water.
2. Inspection, filling and draining of transmission fluid.
3. Adjustment, removal and installation of the fan belts.
4. Inspection, filling and removal of the battery and battery cover.
5. Inspection and filling of brake fluid.
6. Inspection and bleeding of the brake system and servo unit.
7. Maintenance of clearance for tightening of check bolt on brake safety cylinder.
8. Operation of the spare tire carrier, including mounting and dismounting of the spare tire.
9. Adjustment, removal and installation of distributor and/or cover.

Wheelbase Alteration

With certain applications, it may become necessary to alter the wheelbase of the chassis. The following pages provide the suggested guidelines for accomplishing either shortening or lengthening of the wheelbase.

Shortening/Lengthening the Wheelbase Without Altering the Frame

Since the frame is an integral part of the chassis, it is recommended for the frame not be cut if it is avoidable. When shortening or lengthening the wheelbase on some models, it is possible to do so without cutting the frame. This is possible on models which have a straight frame rail. If the chassis does not have a straight frame rail, it may still be necessary to cut the frame. For instructions on shortening or lengthening these chassis, refer to the “Altering the Wheelbase by Altering the Frame” section of this book. Otherwise, the wheelbase may be shortened or lengthened by removing the rear suspension, drilling new suspension mounting holes at the appropriate spot in the frame, and sliding the rear suspension, suspension liner, and suspension crossmembers forward or aft.

The suspension and suspension crossmembers’ rivet holes left in the frame rail flange must be filled with GRADE 8 bolts and hardened steel washers at both the bolt head and nut, HUC bolts or GRADE 8 flanged bolts and hardened steel washers at the nut. When shortening/lengthening the wheelbase in this manner, the following guidelines must be adhered to:

1. All frame drilling must comply with the DRILLING AND WELDING section of this book.
2. All rivet holes left in the frame rail flange from the suspension and suspension crossmembers must be either filled with GRADE 8 bolts and hardened steel washers at both the bolt head and nut, HUC bolts or GRADE 8 flanged bolts and hardened steel washers at the nut.
3. The components required to be slid forward or aft are the suspension and suspension hangers, suspension crossmembers and suspension frame liner.

Altering the Wheelbase by Altering the Frame

Even on a straight frame rail, it may be desirable to cut the frame and lengthen or shorten the wheelbase rather than simply sliding the rear suspension back or forward. The following section offers some guidelines and suggestions for cutting and lengthening or shortening the frame.

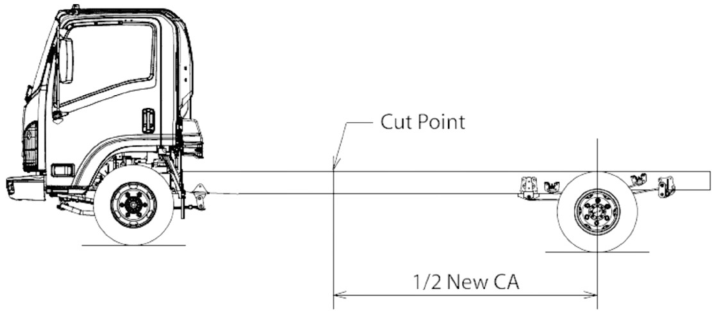
Glossary of Terms – Chassis Wheelbase Alteration

CA – Length from back-of-cab to rear axle centerline in inches.
AL – Added length (in case of a lengthened wheelbase). Difference between WB (new) and WB (old).
SL – Shortened length (in case of shortened wheelbase). Difference between WB (old) and WB (new).

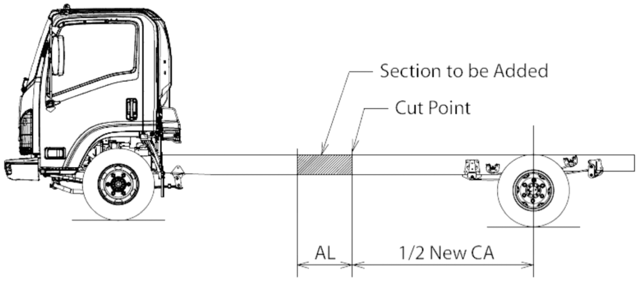
1. Determine the added length (AL) or shortened length (SL) required to lengthen or shorten chassis. (For added wheelbase: New CA = CA + AL; For shortened wheelbase: New CA = CA – SL.)

2. Obtain the material to be used as the insert for the lengthened wheelbase in the correct length (AL). The insert must have the same cross sectional dimensions and yield strength as the original frame rail.

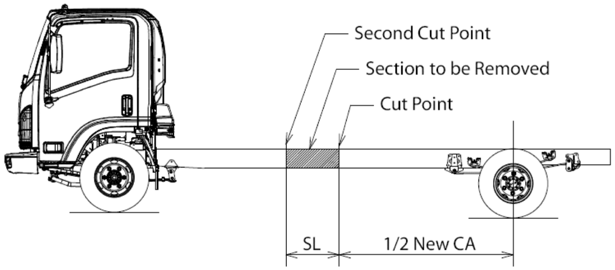
3. Divide the new CA by two (2). Measure new CA/2 from the center of the rear axle forward and mark this point on the chassis frame (see figure below).



4. Cut the chassis frame at this point. If the wheelbase is to be lengthened, addition of the previously obtained insert (of length AL determined in step 1) will be made at this time. If the wheelbase is to be shortened, measure the distance (SL) forward of this cut and remove a length (SL) section from the chassis frame (see figure below). Insure that an adequate area on the frame remains for the required addition of the necessary reinforcements. These are the only suggested places for cutting the frame and reinforcements but may be changed upon the advice of GM Upfitter Integration Team.

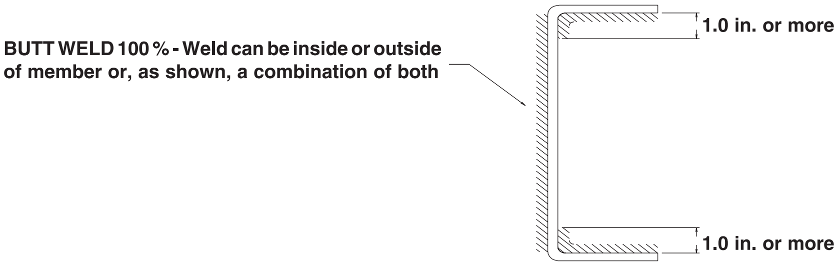


Lengthening the Wheelbase



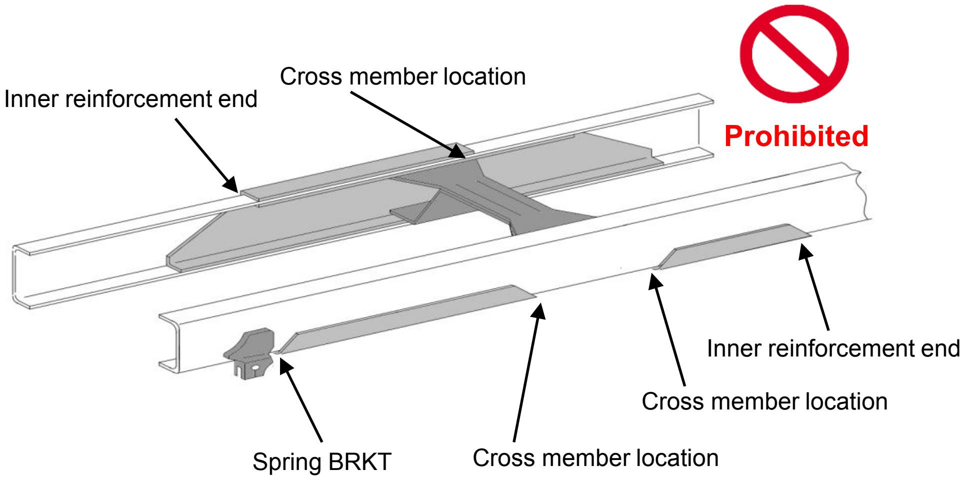
Shortening the Wheelbase

5. When welding the insert (length AL for wheelbase lengthening) to the original frame rail, a continuous butt weld must be used at the splices. When shortening the wheelbase, weld the ends of the chassis frame together with a continuous butt weld over the junction of the frame ends. Weld can be both the inside and outside of the frame rails using welding techniques prescribed by established welding standards (ref. SAE J1147) and in accordance with this guide. An example of this weld is shown below.


BUTT WELD 100 % - Weld can be inside or outside of member or, as shown, a combination of both
1.0 in. or more
1.0 in. or more

Installation position of reinforcement material

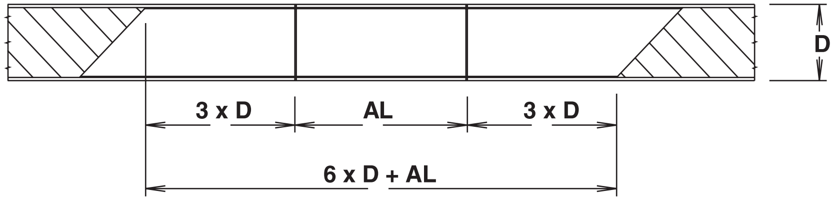
- Ends of outer reinforcement and inner reinforcement should not overlap.
- An end of outer reinforcement and cross member should not overlap.
- An end of outer reinforcement and spring bracket should not overlap.


Prohibited
Cross member location
Inner reinforcement end
Inner reinforcement end
Cross member location
Spring BRKT
Cross member location

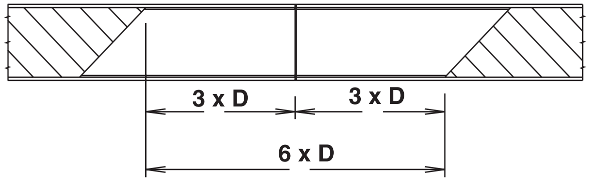
6. Determine the appropriate additional internal reinforcements which are required using this equation:

Reinforcement Length = AL + 6 x (original frame rail web depth).

The figure below shows how this reinforcement is to be placed over the extended or shortened section of the frame rail.



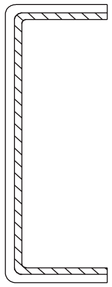
Lengthened Wheelbase



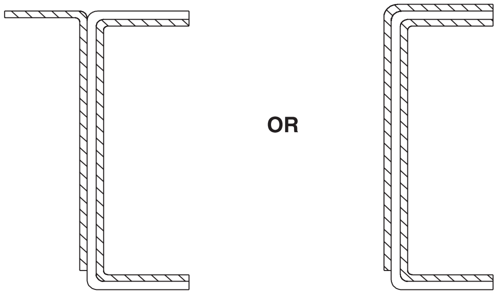
Shortened Wheelbase

D = Original frame rail web depth

The suggested cross section of this reinforcement is a snug fit inner channel. If the new wheelbase exceeds the upper limit of the optional wheelbases of this model, i.e.; a “long bridge”, it may be necessary to use an “inverted L” reinforcement in addition to the snug fit channel reinforcement. GM Upfitter Integration Team should be consulted for approval of such cases. It should be noted that these methods of reinforcements, and any other methods which may be used, require a 45° angled cut at both ends to avoid stress concentrations in the frame (note the figures under item 7).

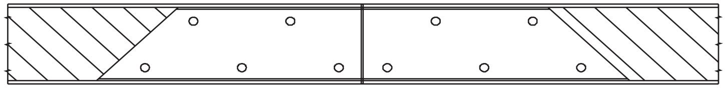


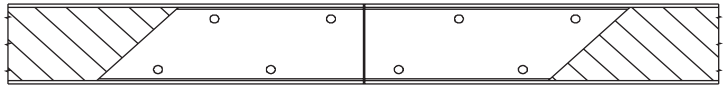
Snug fit inner channel



Snug fit inner channel with "Inverted L" for "Long Bridge" wheelbases

7. The reinforcements must be fastened securely to only the web of the original chassis frame rail. The reinforcement must be held rigidly in place using either HUC bolts, GRADE 8 bolts and hardened steel washers at both the bolt head and nut, or GRADE 8 flanged bolts and hardened steel washers at the nut. Below are some suggested bolt patterns. It should be noted that these bolt patterns must not align the bolts vertically, i.e.: the bolt pattern must be staggered.





9. The propeller shafts' overall length will also need to be lengthened or shortened. If the extension is within the limits of the optional wheelbases of the respective model, the exact propeller shaft lengths and angles are given on or about Page 12 of the respective sections of this book. If the modified wheelbase exceeds the optional wheelbases of the respective model, the following guidelines must be adhered to:
    a) Propeller Shaft Length - the maximum propeller shaft lengths (pin to pin) for the respective models are shown in the table below.

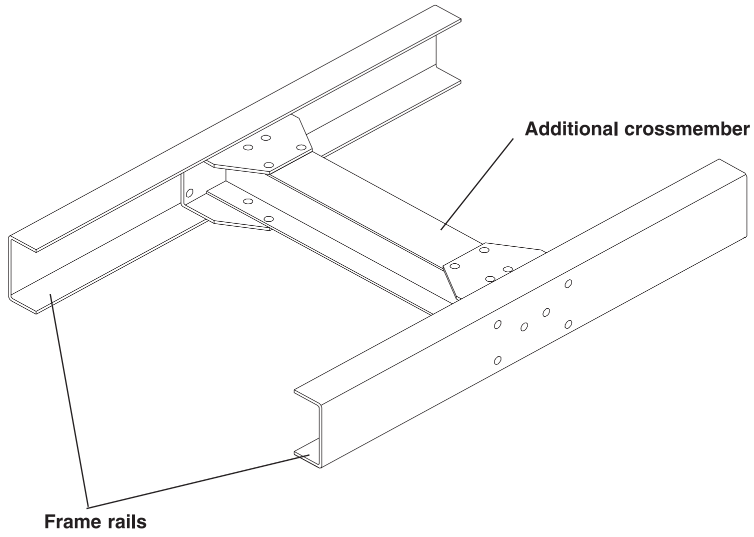
ENGINE	DIESEL
Model	6500 / 7500
Propeller Shaft Diameter (in.)	4.0
Maximum Propeller Shaft Length (in.)	67.9

    b) Propeller Shaft Angles - the maximum propeller shaft angles, with respect to the previous shaft, are shown in the table below.
    c) The propeller shaft angles must be designed such that the angles will cancel to avoid propeller shaft whip.
    d) The propeller shaft yokes must be assembled such that the propeller shaft yokes are "in phase."

ENGINE	DIESEL
Model	6500 / 7500
Maximum Propeller Shaft Angle	3.4°

10. Extending the frame will also require relocation and/or addition of crossmembers. If the extension is within the limits of the optional wheelbases of the respective model, the exact crossmember locations and dimensions are given in the respective model sections of this book. If the modified wheelbase exceeds the optional wheelbases of the respective model, the following guidelines must be adhered to:
    a) The crossmember location will largely be determined by the propeller shaft lengths and where the center carrier bearing locations are for the propeller shaft assembly.
    b) A crossmember must be located at the front and rear spring hangers of the rear suspension (refer to the appropriate section of this book to see where these suspension crossmembers are to be located).

c) The crossmember must be constructed such that it supports both the upper and lower flange on each frame rail (see drawing on next page). A crossmember such as the one on the next page may be constructed, or Chevrolet crossmembers may be obtained from your GM dealership.



d) The maximum distance between crossmembers for the respective models is given in the table below.

ENGINE	DIESEL
Model	6500 / 7500
Maximum Distance Between Crossmembers (in.)	35.7

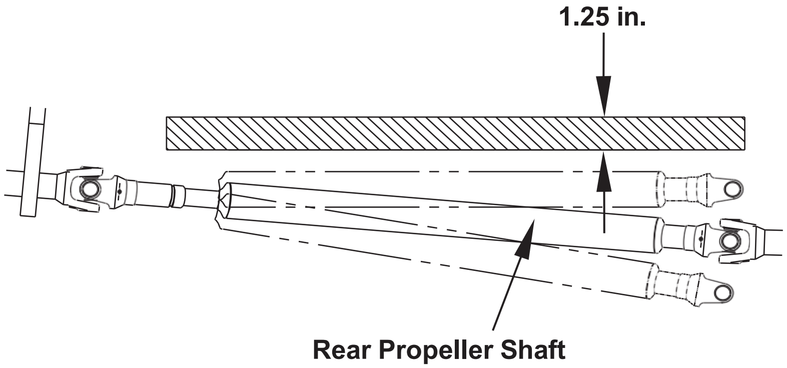
e) The drilling for any additional holes in the frame rails must comply with the DRILLING AND WELDING section of this book.

11. All other aspects of lengthening or shortening the wheelbase must comply with the applicable section of this Body Builder’s Guide. For special applications and longer than recommended body lengths, GM Upfitter Integration Team must be consulted for approval.

12. Please contact GM Upfitter Integration Team for guidelines on 6500 / 7500 Chassis frame modifications when the vehicle is equipped with an anti-lock brake system.

Rear Propeller Shaft

With the rear springs at maximum deflection, at least 1.25 inches of clearance should be provided over the rear propeller shaft.



NOTE: For recommended clearances, please refer to the Rear Axle Chart in each model's respective section.

Other Clearances

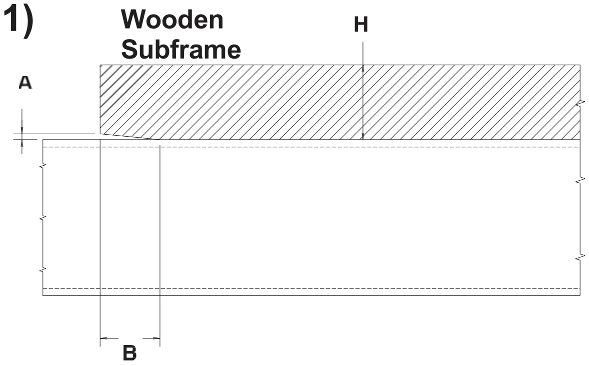
Accessibility to the grease nipple on the rear spring bracket/shackle should be provided so that serviceability with a grease gun is not hampered.

Parts	Location	Minimum Clearance (in)
Brake Hose	Axle Side	6.7
	Frame Side	1.6
Shock Absorber	Axle Side	2.4
	Frame Side	1.2
Parking Brake Cable	-	1.2

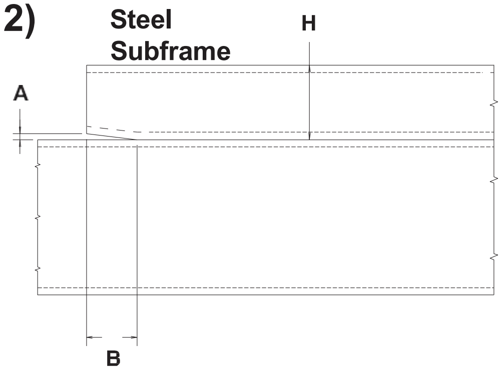
Subframe Contour

Contouring of the front end of the subframe members as shown in the three illustrations below will prevent stresses from being concentrated on certain areas of the chassis frame.

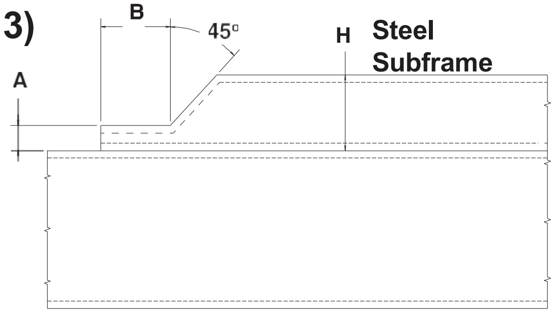
1)


Wooden Subframe
H
A
B

2)

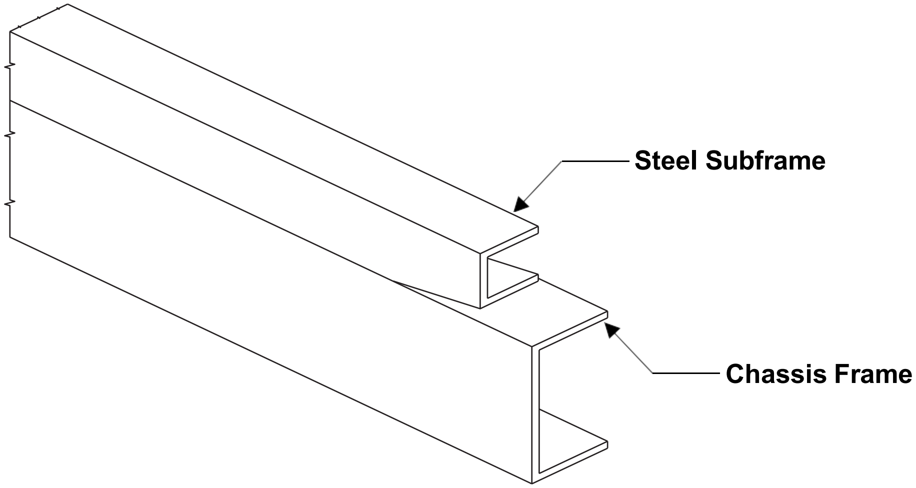

Steel Subframe
H
A
B

3)


B
45°
H
Steel Subframe
A

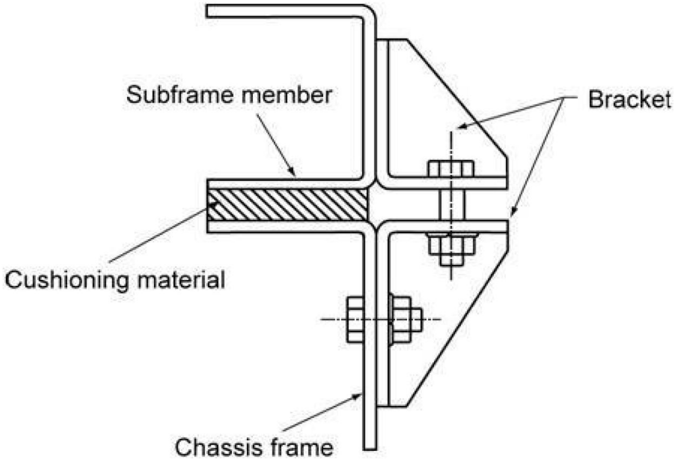
Drawing	A	B
1)	0.2 in.	$\frac{H}{2} \cong H$
2)	0.2 in.	H or greater
3)	$\frac{H}{3}$	H or greater

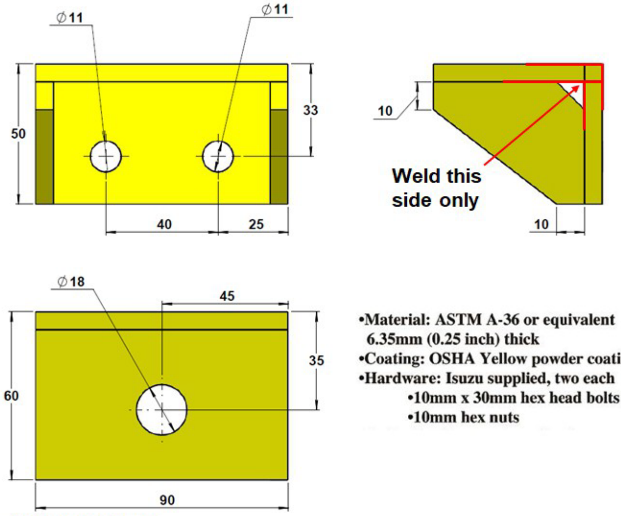
When using a steel subframe, do not close off the end of the subframe.


Steel Subframe
Chassis Frame

Subframe Mounting - Bracket Installation

Mounting brackets should be clamped to the chassis frame using bolts. For proper positions in which to install the bolts, refer to the section of this document "Modifications to the Chassis Frame." In addition to the illustrated bracket and U-bolts a shear plate may be required for adequately body mounting. The body company will be responsible for engineering their own mounting system.


Subframe member
Bracket
Cushioning material
Chassis frame

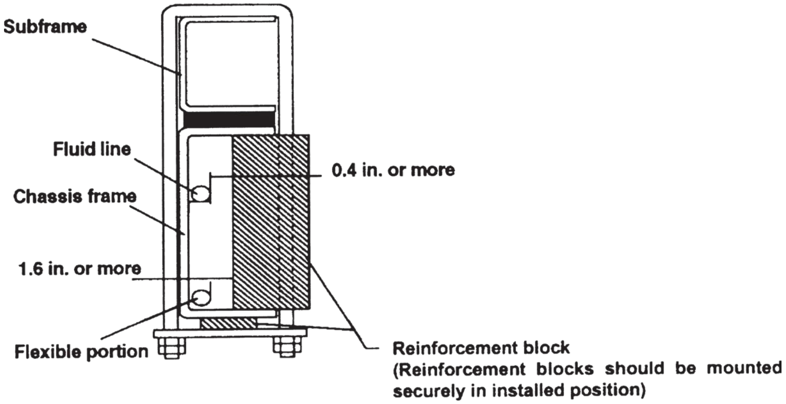

Ø11
Ø11
50
33
40
25
10
Weld this side only
10
Ø18
45
35
60
90

- •Material: ASTM A-36 or equivalent 6.35mm (0.25 inch) thick
- •Coating: OSHA Yellow powder coating
- •Hardware: Isuzu supplied, two each
  - •10mm x 30mm hex head bolts
  - •10mm hex nuts

All Dimension in mm

U-bolt Installation (Supported behind Rear Axle)

When U-bolts are used to retain the subframe, reinforcement blocks must be installed in the frame members. This will prevent distortion of the frame flange as they are tightened. The drawing indicates the correct placement of reinforcement blocks. If you use wood blocks, be sure that there is sufficient clearance between them and any parts of the exhaust system. The use of J-bolts to retain the subframe is strictly prohibited.If any fluid lines or electric cables are located near the reinforcement blocks, you must provide at least 0.4 inches of clearance between rigid or stationary portions, and at least 1.6 inches between moveable or flexible portions of the lines.


Subframe
Fluid line
0.4 in. or more
Chassis frame
1.6 in. or more
Flexible portion
Reinforcement block
(Reinforcement blocks should be mounted securely in installed position)

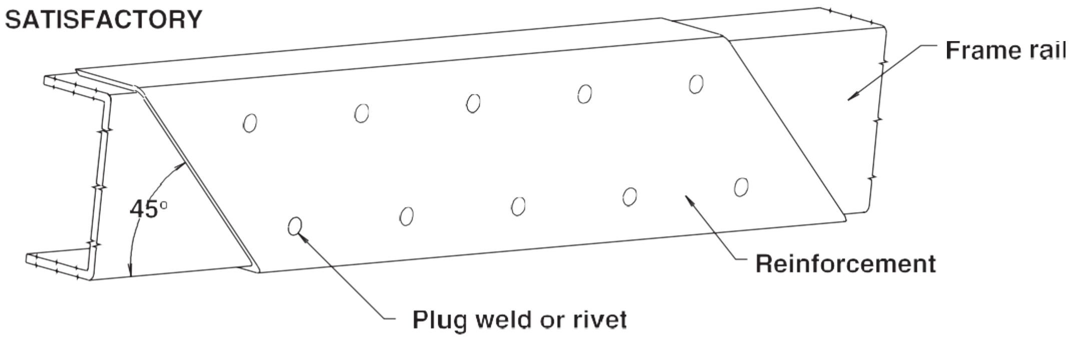
Reinforcement of Chassis Frame

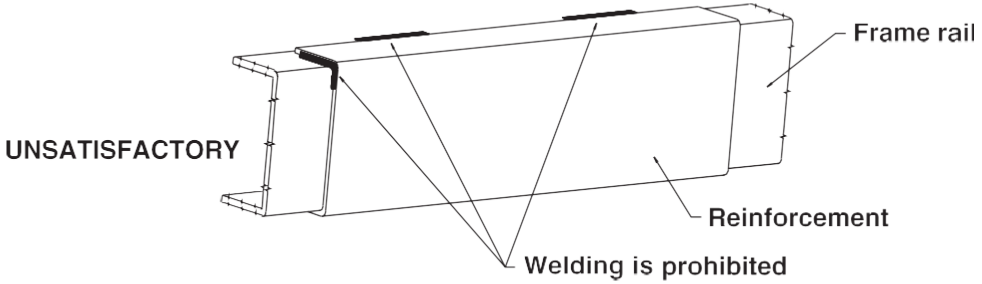
Reinforcements must be installed to prevent the considerable variation in the section modulus. They must be welded so as to avoid localized stresses. The frame of the LCF is made of HT540 Hot-Rolled steel. The drawing below illustrates the correct and incorrect methods of frame reinforcement.

Welding

Keep reinforcement plates and chassis frame free from moisture and water. Avoid cooling with water after welding. Use a suitable means to protect pipes, wires, rubber parts, leaf springs, etc. against heat and effect of sputtering. Remove fuel tank assembly when welding portions near the fuel tank. Remove coat of paint completely when welding painted areas. Repaint exposed metal after welding.

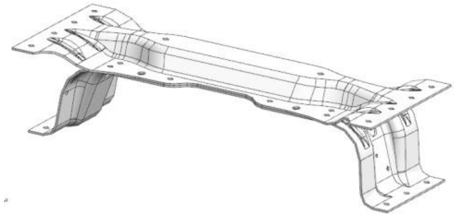
When installing reinforcement by riveting or plug welding, place plugs or rivets in a zigzag pattern. When performing plug welding, be sure that electrical components, such as electric harnesses on the inner side of a chassis frame side member, are a minimum of 50mm apart from welding site. When inserting a rivet in a hole from which another rivet has previously been removed, the rivet should be 1 or 2mm larger in diameter than the removed one. Cold rivet only.



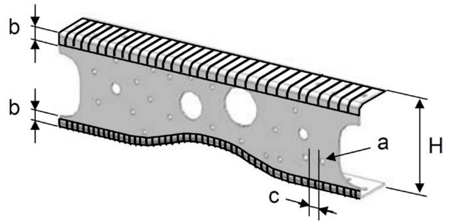


Crossmember Modification

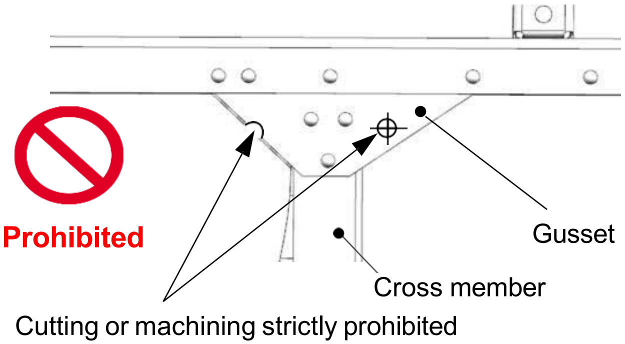
Alligator type cross member - For alligator type, hole drilling, notch making, and welding are prohibited.



Channel type cross member: a – Allowable maximum hole diameter is 9mm, and this hole should be used only for piping or harness routing.
b – Prohibited area, no drilling should be done in this area.
c – See Figure 1 on page 38 for minimum required distance.



Gusset: Hole drilling and notch making are prohibited.


Prohibited
Gusset
Cross member
Cutting or machining strictly prohibited

The maximum distance between crossmembers for the respective models is given in the table below.

MODEL	5500 XD
Maximum Distance Between Crossmembers (in.)	35.7

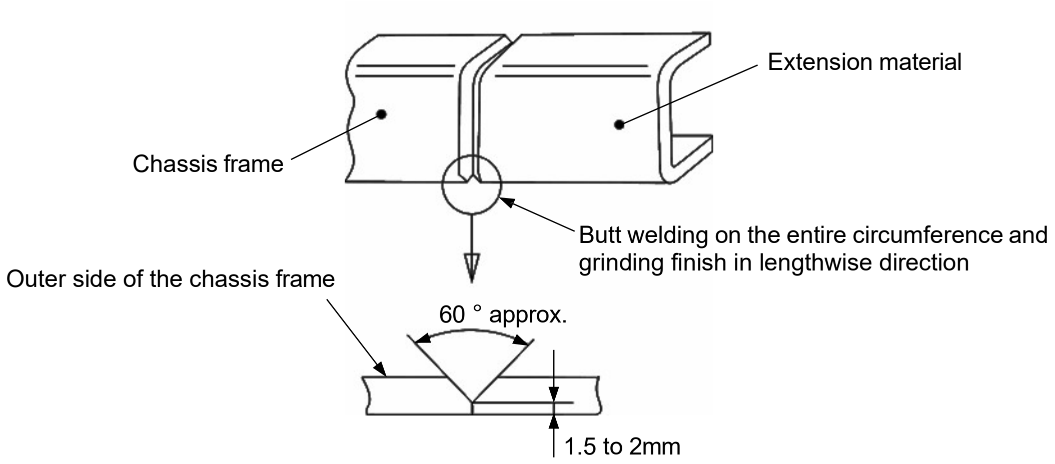
Rear Overhang Modification

If a body protrudes outward from the rear end of the chassis frame by 300 mm (11.8 in.) or more, lengthen the rear overhang of the chassis frame as indicated below. If it is necessary to cut the chassis frame, ensure that the cut location does not split existing holes.

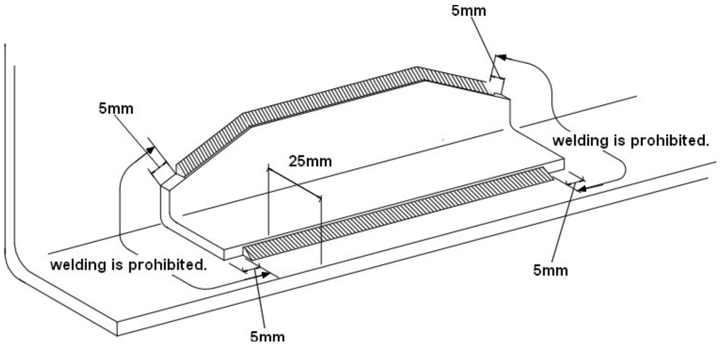
Refer to previously mentioned welding guidelines.

1. Extension material
    - The extension material should be equivalent to that of side members. Refer to specification information for the vehicle model in consideration.
    - Thickness and bending radius of the extension material should be the same as that of side members. Refer to specification information for the vehicle model in consideration.

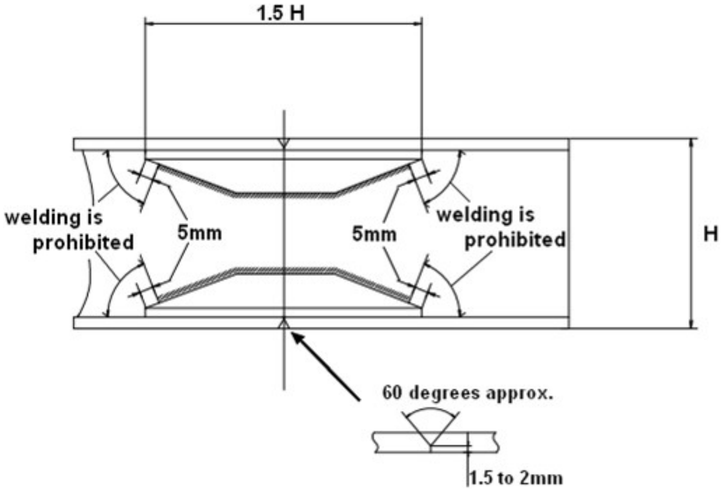
2. Installing extension material
    - **Extension material is 300mm or shorter:** Join extension material and chassis frame with a continuous butt weld around the entire circumference. After welding, grind finish weld surface.

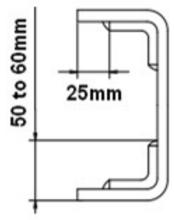

Extension material
Chassis frame
Butt welding on the entire circumference and grinding finish in lengthwise direction
Outer side of the chassis frame
60 ° approx.
1.5 to 2mm

- **Extension material is longer than 300mm:** Join extension material and chassis frame with a continuous butt weld around the entire circumference, and then fit a reinforcement on the inner side of the chassis frame and extension material.


5mm
5mm
25mm
welding is prohibited.
welding is prohibited.
5mm
5mm
5mm

Side member thickness [mm]	Reinforcement material thickness (recommendation value) [mm]
8.0 at minimum	7.0
7.5	5.5 to 7.0
7.0	4.5 to 6.0
4.0 to 6.0	4.5


1.5 H
welding is prohibited
5mm
5mm
welding is prohibited
H
60 degrees approx.
1.5 to 2mm


50 to 60mm
25mm

Low Voltage (12 V) Electrical System Modifications

⚠ WARNING

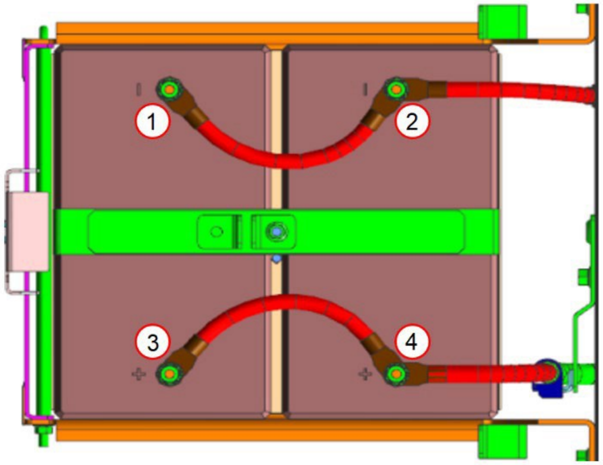
- **Before servicing any electrical component, the ignition key must be in the LOCK position and all electrical loads must be OFF, unless instructed otherwise in Chevrolet service procedures. If a tool or equipment could easily come in contact with a live exposed electrical terminal, also disconnect the negative battery cable. Do not disconnect cable within 3 minutes after turning the ignition key to the Lock position. Failure to follow these precautions may cause personal injury and/or damage to the vehicle or its components.**

ADVICE

- Modifications/add-on wiring must be carefully reviewed to ensure compatibility with the base vehicle wiring by reviewing system schematics, wire routing paths, harness connections, etc.
- Due to the wide range of modifications that may be required for vocational needs, it is not feasible for the O.E.M. to take into account all potential revisions. For this reason, any person modifying existing vehicle wiring must assume responsibility that the revisions have not degraded the electrical system performance.
- Any add-on wiring needs to be properly fused and routed to prevent cut, pinch, and chafe problems, as well as avoid exposure to excessive heat.
- Care must be exercised that existing vehicle interfaces do not have their current load capabilities exceeded, and that the respective control devices are not overloaded.
- Added wire size should be at least as large as the wire to which it is attaching in order for fuse protection to be maintained.
- Electrical wiring components can be obtained through your authorized Chevrolet dealers.

Battery Terminal Tightening Torque

No.	NUT SIZE	TORQUE
① ~ ④	3/8-16 (inch)	15±2 (N·m)



Low Voltage (12 V) Harnessing and Wiring

To increase the reliability of the wiring, all frame harnesses are covered with corrugated vinyl tubing. The following instructions apply to extending or modifying these harnesses. See the separate Electrical Section for information on commonly used circuits in the LCF Chassis.

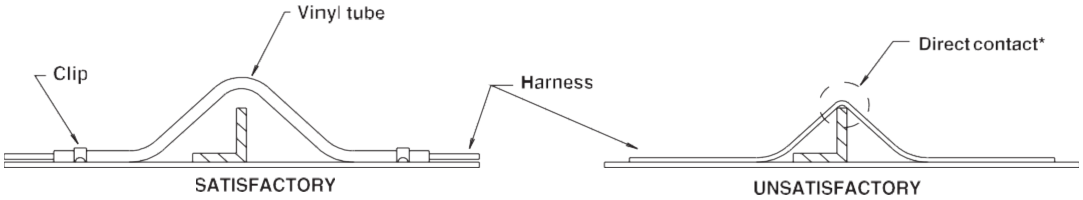
Wiring

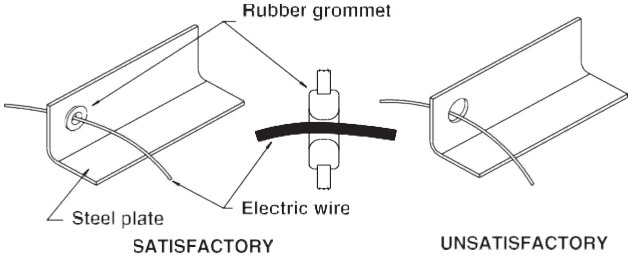
ADVICE

- Most wiring connections on Chevrolet vehicles are made with terminals. We recommend the use of terminals when splicing cables and wires.
- When splicing, use new wire of the same gauge, and do not make splices inside the corrugated tubing.
- When making connections to the end of the harness, make sure the connections are electrically perfect. Use insulating tape as needed to prevent the entry of water, which results in short circuits and/or corrosion.
- When making new circuits, or modifying circuits already installed, make the cables only just taut enough to remove any slack. Use clips or grommets where required to protect cables from heat or sharp edges.
- Always use rustproof clips and apply vinyl coating to that portion of the clips in direct contact with the harnesses.
- No scotch clips or connectors.
- To minimize the vibration of the harness, clipping points should be set up according to the table below.
- When changing the length of the battery cable, do not cut or splice the existing cable. Make up a new cable of the correct length and wire gauge for the load and distance, without splices.
- When using connectors, use a socket (female) connector on the electrical source side and a plug (male) connector on the electrical load side to lower the possibility of a short circuit when disconnected.
- When connecting cables to moving or vibrating parts such as the engine or transmission, be sure to maintain sufficient slack in the wiring to absorb the vibration. Follow the example of existing cables connected by Chevrolet. Keep flexible cables clear of other parts.
- Do not use vinyl tape in the engine compartment. The heat will tend to make it peel off. Use plated steel clips coated with rubber or vinyl.
- When locating auxiliary equipment or lines near the chassis components caution should be used to protect the chassis components from excessive vibration, heat or chemical reactions.
- See the following page for examples of proper harness protection

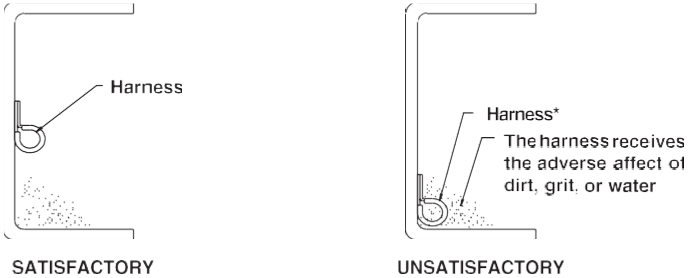
Wiring Harness Clip Distances

Harness Diameter	Clip Distance
less than 0.2 in.	less than 11.8 in.
0.2 in. ~ 0.4 in.	approx. 15.7 in.
0.4 in. ~ 0.8 in.	approx. 19.7 in.


Vinyl tube
Clip
Harness
Direct contact*
SATISFACTORY
UNSATISFACTORY

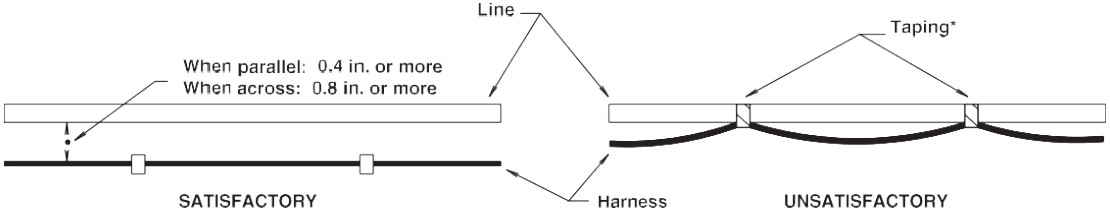

Rubber grommet
Steel plate
Electric wire
SATISFACTORY
UNSATISFACTORY

* Cables should not be in contact with sharp edges or pierced holes.


Harness
Harness*
The harness receives the adverse affect of dirt, grit, or water
SATISFACTORY
UNSATISFACTORY

* Harnesses should not be installed on inside lower face of the chassis frame.

* Harnesses should not be taped to fuel lines or other lines. A sufficient clearance should be maintained between harness and pipe lines.


Line
Taping*
When parallel: 0.4 in. or more
When across: 0.8 in. or more
SATISFACTORY
Harness
UNSATISFACTORY

Wire Color Code

The electrical circuits of the LCF Chassis Cab are connected with low-voltage stranded wire for automotive applications. The color coding standards are as follows for the LCF Chassis Cab:

(1)	Black	B	Starter circuits and grounds
(2)	White	W	Generator (alternator) circuit
(3)	Red	R	Lighting circuit
(4)	Green	G	Signal circuit
(5)	Yellow	Y	Instrument circuit
(6)	Brown	Br	Accessory circuit
(7)	Light Green	Lg	Other circuit
(8)	Blue	L	Windshield wiper motor circuit

Maximum Allowable Current by Wire Size

Harness Design Diameter (mm)	AWG Equivalent	No. of Wires/Wire Diameter (mm)	Cross Sectional Area (mm2)	Maximum Allowable Current (Amps)
100	00	217/0.80	109.1	363
85	0	169/0.80	84.96	305
60	1	127/0.80	63.84	248
50	1	108/0.80	54.29	223
40	1	85/0.80	42.73	191
30	2	70/0.80	35.19	171
20	4	41/0.80	20.61	123
15	6	84/0.45	13.36	93
8	8	50/0.45	7.952	68
5	8	65/0.32	5.228	51
3	12	41/0.32	3.297	39
2	14	26/0.32	2.091	29
1.25	16	16/0.32	1.287	21
0.85	18	11/0.32	0.8846	17
0.5	20	7/0.32	0.5629	13

Reference: The values given in the “maximum allowable current” column are based on the ambient temperature condition of 104°F with temperature increase of 104°F.

Fluid Lines

ADVICE

- Do not disturb the layout of any brake lines or coolant lines. Brake fluid lines must not be cut and spliced under any circumstances.

Rear Lighting

Brackets installed are temporary. Please do not use these brackets for body installation.

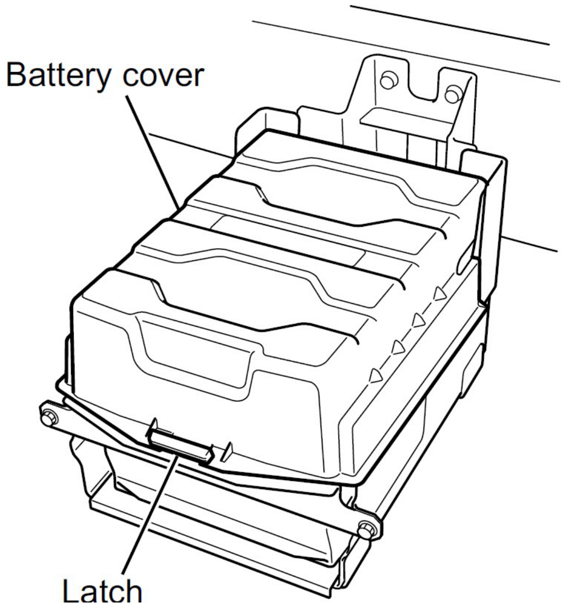
Serviceability

ADVICE

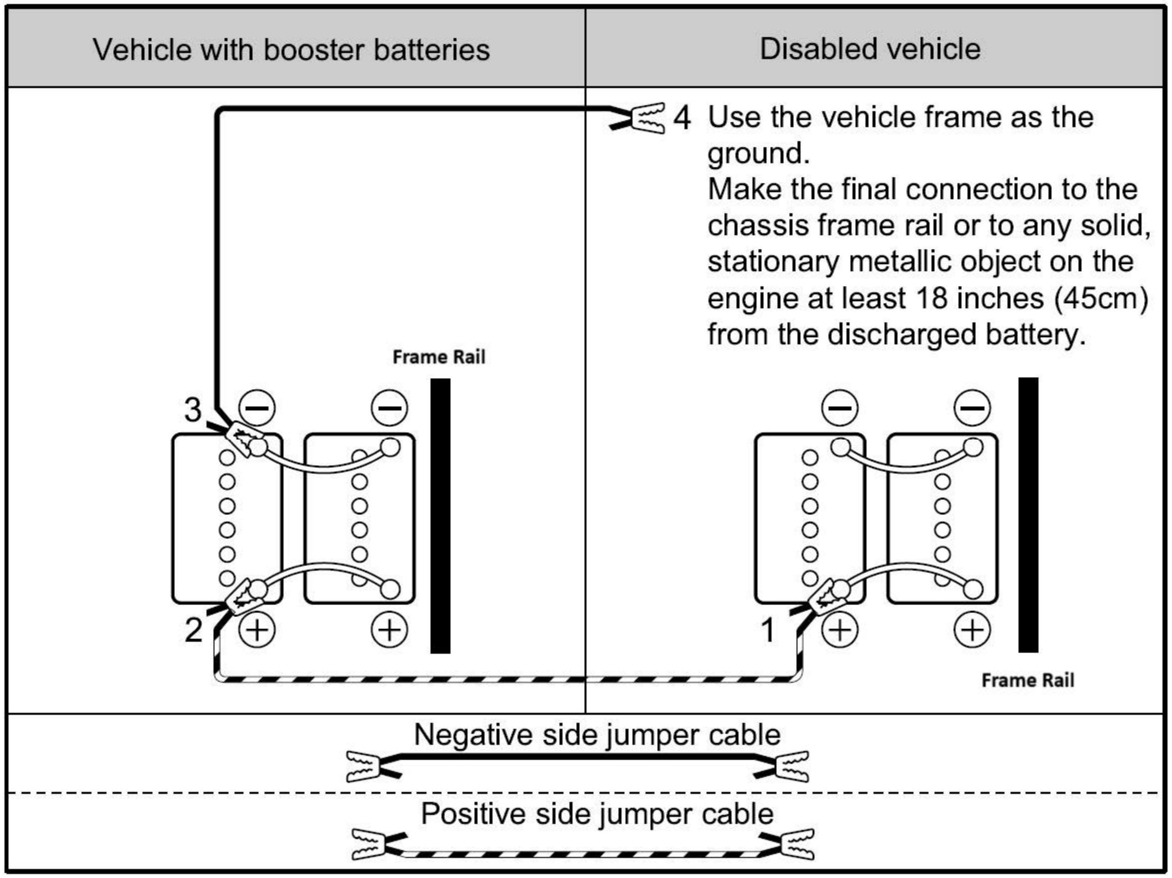
- No matter what other modifications or changes are made, access to components requiring daily preventive maintenance or other routine service must not be obstructed. This includes the following items:

  1. Inspection and operation of charge port.
  2. Inspection and operation of 12V battery.
  3. Inspection and operation of MSDs.
  4. Inspection and removal of HV batteries.
  5. Adjustment, removal and installation of the fan belts.
  6. Inspection, filling and removal of the battery and battery cover.
  7. Inspection and filling of brake fluid.
  8. Inspection and bleeding of the brake system and servo unit.
  9. Maintenance of clearance for tightening of check bolt on brake safety cylinder.
  10. Adjustment, removal and installation of distributor and/or cover.

12-volt Battery Box


Battery cover
Latch

12-volt Battery Jumper Cable Connection Sequence


Vehicle with booster batteries
Disabled vehicle
4
3
2
1
Frame Rail
Frame Rail
⊖
⊕
Negative side jumper cable
Positive side jumper cable

Use the vehicle frame as the ground.
Make the final connection to the chassis frame rail or to any solid, stationary metallic object on the engine at least 18 inches (45cm) from the discharged battery.

LCF Gas & Diesel Body Application Summary Chart

MODEL GVWR	MODEL CODE	WB (in)	BOC (in)	BODY LENGTHS 10 ft.	12 ft.	14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.
3500 GAS 12,000 lbs	**1C1**	109	7.7	X	X						
	1C2	132.5	7.7			X					
	1C3	150	7.7				X	X			
	1C4	176	7.7						X		
3500 CREW CAB GAS 12,000 lbs	**1D3**	150	5		X						
	1D4	176	5				X				
4500 HD GAS 14,500 lbs	**1F1**	109	7.7	X	X						
	1F2	132.5	7.7			X					
	1F3	150	7.7				X				
	1F4	176	7.7					X	X		
4500 HD CREW CAB GAS 14,500 lbs	**1G3**	150	5		X						
	1G4	176	5				X				
5500 GAS 17,950 lbs	**1R2**	132.5	7.7		X	X					
	1R3	150	7.7				X				
	1R4	176	7.7					X	X		
	1R5	200	7.7							X	
5500 CREW CAB GAS 17,950 lbs	**1S3**	150	5		X						
	1S4	176	5				X				
	1S5	200	5					X			
5500 GAS 19,500 lbs	**1U2**	132.5	7.7		X	X					
	1U3	150	7.7				X				
	1U4	176	7.7					X	X		
	1U5	200	7.7							X	
	1U6	212	7.7								X
5500 CREW CAB GAS 19,500 lbs	**1V3**	150	5		X						
	1V4	176	5				X				
	1V5	200	5					X			
	1V6	212	5						X		
3500 DIESEL 14,500 lbs	**3F1**	109	7.7		X						
	3F2	132.5	7.7			X					
	3F3	150	7.7				X[1]	X			
	3F4	176	7.7						X[1]		
4500 CREW CAB DIESEL 14,500 lbs	**3G3**	150	5.3		X[1]						
	3G4	176	5.3				X[1]				
4500 DIESEL 16,000 lbs	**3Y1**	109	7.7	X	X						
	3Y2	132.5	7.7			X					
	3Y3	150	7.7				X	X			
	3Y4	176	7.7					X	X		
4500 CREW CAB DIESEL 16,000 lbs	**3Z3**	150	5.3		X						
	3Z4	176	5.3				X				
5500 DR DIESEL[4] 17,950 lbs	**3R1**	109	7.7	X							
	3R2	132.5	7.7		X[1]	X					
	3R3	150	7.7				X	X			
	3R4	176	7.7						X		
	3R5	200	7.7							X	
5500 DR CREW CAB DIESEL[4] 17,950 lbs	**3S3**	150	5.3		X						
	3S4	176	5.3				X				
5500 DIESEL 19,500 lbs	**3U1**	109	7.7	X							
	3U2	132.5	7.7		X[1]	X					
	3U3	150	7.7				X				
	3U4	176	7.7					X	X		
	3U5	200	7.7							X	
5500 CREW CAB DIESEL 19,500 lbs											

Indicated body size and chassis wheelbase combination requires the installation of a liftgate for an acceptable weight distribution.

WARNING - Body selection recommendations are based on water level weight distribution and no accessories (i.e.liftgates or refrigeration units). This table is intended for reference and does not preclude the necessity for an accurate weight distribution calculation.

[3] The BOC (back of cab) values shown are the minimum requirements for the chassis. A weight distribution analysis should be performed for the completed vehicle to determine the necessary BOC value.

[4] Available through PIO ordering

6500 XD & 7500 XD Body Application Summary Chart

6500 XD

BODY APPLICATION SUMMARY												
MODEL CODE	GVWR (lbs)	WB (in)	BOC (in)	14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.
MT1	25,950	152	10.4	X	X							
MT2		170				X						
MT3		188					X					
MT4		200						X				
MT5		212							X			
MT6		224								X		
MT7		236									X	
MT8		248										X

7500 XD Derate

BODY APPLICATION SUMMARY												
MODEL CODE	GVWR (lbs)	WB (in)	BOC (in)	14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.
MW1	25,950	152	10.4	X	X							
MW2		170				X						
MW3		188					X					
MW4		200						X				
MW5		212							X			
MW6		224								X		
MW7		236									X	
MW8		248										X

Notes:

[1] WARNING - Body selection recommendations are based on water level weight distribution and no accessories (i.e.liftgates or refrigeration units). This table is intended for reference and does not preclude the necessity for an accurate weight distribution calculation.

[2] The BOC (back of cab) values shown are the minimum requirements for the chassis. A weight distribution analysis should be performed for the completed vehicle to determine the necessary BOC value.

2026 Chevrolet Low Cab Forward

7500 XD: Dry Freight Bodies

BODY APPLICATION SUMMARY												
MODEL CODE	GVWR (lbs)	WB (in)	BOC (in)	BODY ONLY								
				14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.
MV1	33,000	152	10.4	X								
MV2		170			X							
MV3		188				X						
MV4		200					X					
MV5		212						X				
MV6		224							X			
MV7		236							X	X		
MV8		248								X	X	

7500 XD: Dry Freight Bodies with Liftgate

BODY APPLICATION SUMMARY												
MODEL CODE	GVWR (lbs)	WB (in)	BOC (in)	BODY LENGTHS W/ LIFTGATE								
				14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.
MV1	33,000	152	10.4	X								
MV2		170			X							
MV3		188				X						
MV4		200					X					
MV5		212						X				
MV6		224						X				
MV7		236							X			
MV8		248								X	X	

7500 XD: Refrigerated Freight Bodies

BODY APPLICATION SUMMARY												
MODEL CODE	GVWR (lbs)	WB (in)	BOC (in)	BODY LENGTHS W/ REEFER								
				14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.
MV1	33,000	152	10.4	X								
MV2		170			X	X						
MV3		188				X	X					
MV4		200					X	X				
MV5		212						X				
MV6		224							X			
MV7		236								X		
MV8		248									X	X

Notes:

[1] WARNING - Body selection recommendations are based on water level weight distribution and no accessories unless indicated (i.e.liftgates or refrigeration units). This table is intended for reference and does not preclude the necessity for an accurate weight distribution calculation.

[2] The BOC (back of cab) values shown are the minimum requirements for the chassis. A weight distribution analysis should be performed for the completed vehicle to determine the necessary BOC value.

Mechanical and Cab Specifications

Engine Horsepower and Torque Chart

ENGINE	MODEL(S)	NET HP[1] HP/RPM	NET TORQUE[1] HP/RPM	GROSS HP[1] HP/RPM	GROSS TORQUE[1] LBS-FT/RPM
GMPT 6.6L-V8	3500 HG GAS 4500 HG GAS 5500 HG GAS 5500 XG GAS	350/4500	425/3800	-	-
ISUZU 4HK1-TC	4500 HD DIESEL 4500 XD DIESEL 5500 XD DIESEL	210/2500	441/1850	215/2550	452/1850
CUMMINS B6.7	6500 XD 7500 XD DERATE 7500 XD	-	-	260/2400	660/1600

NOTES: [1] HORSEPOWER AND TORQUE RATINGS ARE MEASURED UNDER SAE J1349

GVWR / GCWR Ratings

The following table presents GVW ratings and corresponding GCW ratings for each model truck:

TRUCK MODEL	GVWR (lbs)	GCWR (lbs)*
NPR GAS	12,000	18,000
NPR-HD GAS	14,500	20,500
NQR GAS	17,950	23,950
NRR GAS	19,500	25,500
NPR-HD DIESEL	14,500	20,500
NPR-XD DIESEL	16,000	22,000
NRR DERATE DIESEL	17,950	23,950
NRR DIESEL	19,500	25,500
NRR DERATE EV	17,950	19,500
NRR EV	19,500	19,500
FTR DIESEL	25,950	30,000
FVR DERATE DIESEL	25,950	33,000
FVR DIESEL	33,000	33,000

* The 4500 HD, 4500 XD, 5500 XD are not approved for Hot Shot applications.

Paint Code Chart

PAINT CODE INFORMATION

GM COLOR NAME	AKZO NOBEL CODE	DUPONT CODE	NEXA COLOR CODE	PPG CODE	SHERWIN WILLIAMS/ MARTIN SENOUR	SPIES HECKER CODE	STANDOX CODE	PANTONE (1)
Arc White	FLNA40156	729	729	91508	729	729	729	7541C
Wheatland Yellow	FLNA10182	812	812	83931	812	812	812	137C
Woodland Green	FLNA60181	807	807	48339	807	807	807	3308C
Cardinal Red	ISU736	736	736	75097	736	736	736	202C
Dark Blue	ISU695	695	695	909649	695	695	695	655C
Ebony Black II	ISU508	508	508	N/A	508	508	508	Black 6C

(1) The Pantone colors listed are the closest Pantone color numbers to the GM paint colors and are given for reference only

LCF Towing Procedure

When towing a vehicle: Proper equipment must be used to prevent damage to vehicles during any towing. State and local laws which apply to vehicles in tow must be followed. Vehicles should not be towed at speeds in excess of 55 MPH (88 km/h). Connect to the main structural parts of the vehicle. Do not attach to bumpers, tow hooks or brackets. Use only equipment designed for this purpose. Follow the instructions of the wrecker manufacturer. A safety chain system must be used. The procedures below must be followed when towing to prevent possible damage.

Front End Towing (Front Wheels Off Ground)
To prepare a disabled vehicle for front end towing with front wheels raised off the ground, the following steps are necessary:

- Block the rear wheels of the disabled vehicle.
- Disconnect the propeller shaft at the rear axle. Secure the propeller shaft to the frame or cross member.

CAUTION: When towing, disconnect the driveshaft at the rear axle to ensure the transmission is not damaged.
If there is damage or suspected damage to the rear axle, remove the axle shafts.
Cover the hub openings to prevent the loss of lubricant or entry of dirt or foreign objects.
Place a 10 cm (4 in) wood beam against the towing guide behind the bumper.
(If no 10 cm (4 in) is available, then remove the bumper.) Ensure towing chains do not come into contact with the horns or the bumper.

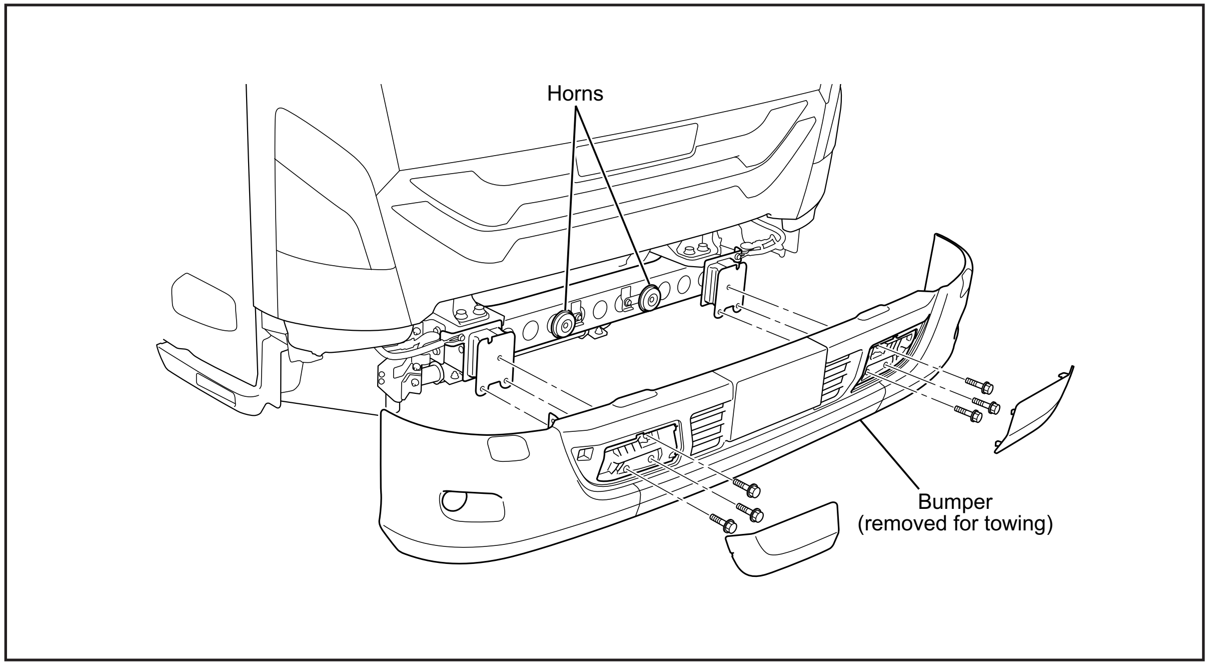


Figure 1

After Towing
After towing the vehicle, block the rear wheels and install axle shafts or driveshaft. Apply the parking brake before disconnecting from the towing vehicle.

Front End Towing (All Wheels On the Ground)
Your vehicle may be towed on all wheels provided the steering is operable. Remember that power steering and brakes will not have power assist. There must be a tow bar installed between the tow vehicle and the disabled vehicle.

Towing with all wheels on the ground
To prepare a disabled vehicle for front end towing with all wheels on the ground, the following steps are necessary:

- Block the wheels of the disabled vehicle.
- Disconnect the propeller shaft at the rear axle. Secure the propeller shaft to the frame or crossmember.

CAUTION:
When towing, disconnect the driveshaft at the rear axle to ensure the transmission is not damaged. Provide wood blocking to prevent towing chains and bar from coming into contact with the bumper. If there is damage or suspected damage to the rear axle, remove the axle shafts. Cover the hub openings to prevent the loss of lubricant or entry of dirt or foreign objects.

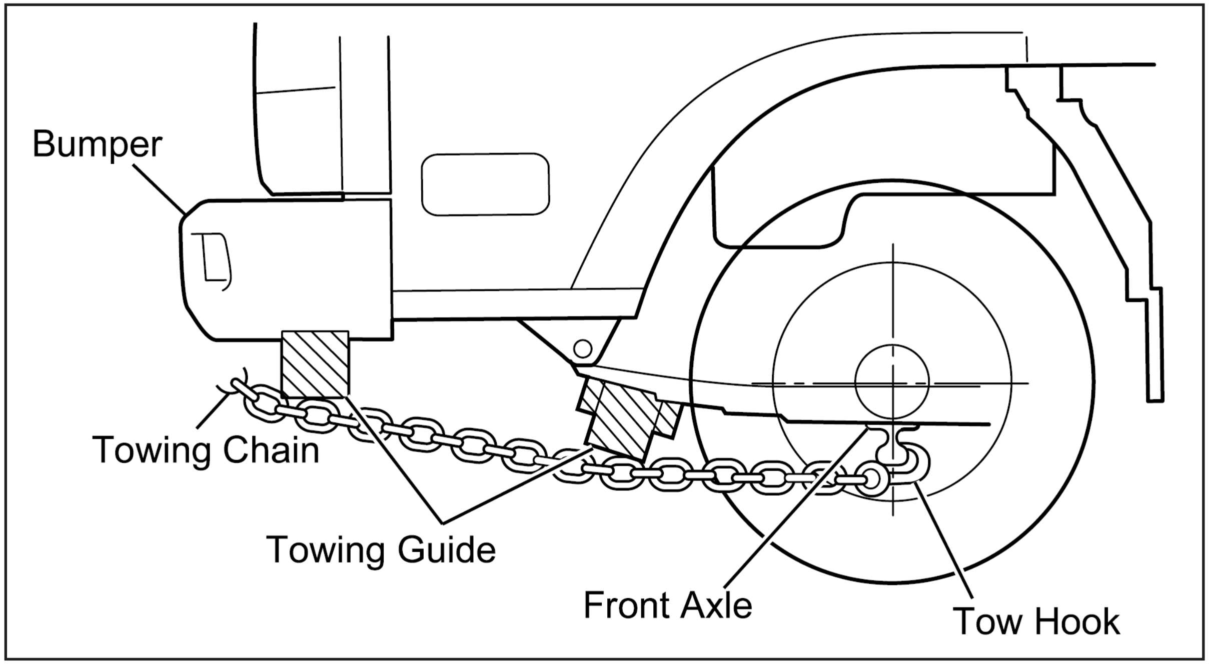


Figure 2

CAUTION:
When towing, disconnect the driveshaft at the rear axle to ensure the transmission is not damaged. Provide wood blocking to prevent towing chains and bar from coming into contact with the bumper. If there is damage or suspected damage to the rear axle, remove the axle shafts. Cover the hub openings to prevent the loss of lubricant or entry of dirt or foreign objects.

After Towing
After towing the vehicle, block the rear wheels and install axle shafts or propeller shaft. Apply the parking brake before disconnecting from the towing vehicle. Check and fill rear axle with oil, if required.

Rear End Towing
When towing a vehicle with rear wheels raised, secure the steering wheel to maintain straight-ahead position. Make certain that the front axle is not loaded beyond the front axle gross axle weight rating (GAWR) as indicated on the vehicle's VIN and weight rating plate.

Special Towing Instructions:

1. All state and local laws regarding such items as warning signals, night illumination, speed, etc., must be followed.

2. Safety chains must be used.

3. No vehicle should ever be towed over 55 MPH (88 km/h).

4. Loose or protruding parts of damaged vehicles should be secured prior to moving.

5. A safety chain system completely independent of the primary lifting and towing attachment must be used.

6. Operators should refrain from going under a vehicle which is being lifted by the towing equipment unless the vehicle is adequately supported by safety stands.

7. No towing operation which for any reason jeopardizes the safety of the wrecker operator or any bystanders or other motorists should be attempted.

6500 XD & 7500 XD Towing Procedure

When towing a vehicle: To move a disabled vehicle, it is best to rely on someone in the wrecker or tow truck business. If that is not possible, follow these procedures. When towing, use appropriate equipment and comply with state and local legal requirements. Do not try to start the engine by towing or pushing the vehicle.

CAUTION:

- **Be sure to chock the wheels when disconnecting the axle shaft. The vehicle could start to move and cause a serious accident. The vehicle will start moving upon disconnecting the axle shaft.**
- **Place the gearshift lever in the "N" position, and tow for a maximum distance of 6.2 miles (10 km) at speeds less than 25 MPH (40 km/h). Other than the above, disconnect the axle shaft when towing to avoid damage to the transmission.**
- **Whenever possible, tow a vehicle with the engine started. If the engine is not started:**
- **The brakes will not be as effective**
- **The steering wheel will be hard to turn**
- **The steering wheel could lock, making it impossible to move. This is extremely dangerous. (When the ignition key is removed.)**
- **If you apply any one of the air brake parking controls while the vehicle is moving, your rig will stop suddenly. If you are not ready for this, you or others could be injured. Do not apply any one of these controls while you are driving, unless you have to make an emergency stop.**

Front End Towing (All wheels on the ground, or the front wheels are off the ground): When it is possible to operate the steering wheel, the vehicle can be towed with all wheels on the ground. If the engine cannot be started, the power steering system does not work, making steering difficult. In addition, when air pressure is low, the brakes will not work. Either install a tow bar between the towing vehicle and the disabled vehicle, or use a tow truck to move the disabled vehicle. To prevent damage to the differential and pinion seal, the axle shafts need to be removed whenever the vehicle is towed with the rear tires on the ground. Remove the axle shaft and plug up the opening of the hub to prevent differential gear oil from leaking, or to prevent dirt or foreign objects from entering the axle. When towing, disconnect the axle shaft at the rear axle to ensure the transmission is not damaged.

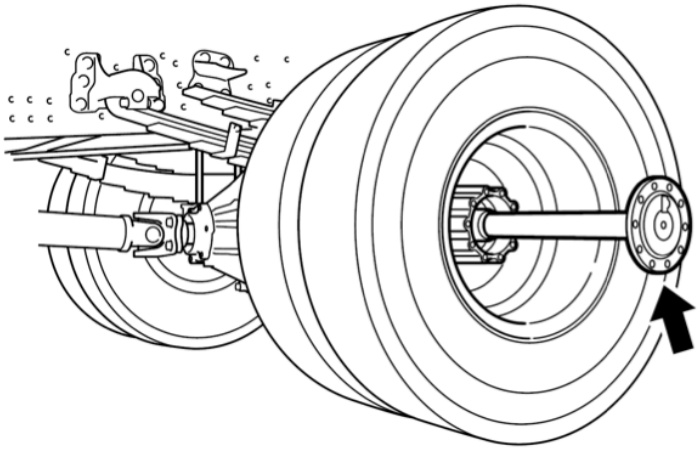


Figure 3

1. If the vehicle is towing or is towed, firmly attach a rope to the front towing hook on the same side.

2. During towing, carefully watch the stop lights of the towing vehicle in order to prevent slack in the rope. Ensure that there are no strong shocks or lateral force applied to the vehicle. Excessive towing load can damage the towing hook.

CAUTION:

- **Do not tow a vehicle at an angle of greater than 15°. This could exert too much stress on the vehicle and damage it.**
- **Attach a rope to the towing hook only. Attaching a rope to any other part of the vehicle could damage it.**
- **Make sure there are no people near the towing rope and hook before towing a vehicle. If the rope snaps, people nearby could be injured.**
- **The towing hook is for use to tow a vehicle with about the same weight as the towing vehicle on good roads.**
- **When coming to channels or muddy areas, unload the vehicle. Do not use the towing hook to tow, but tow with a rope attached to the axle.**

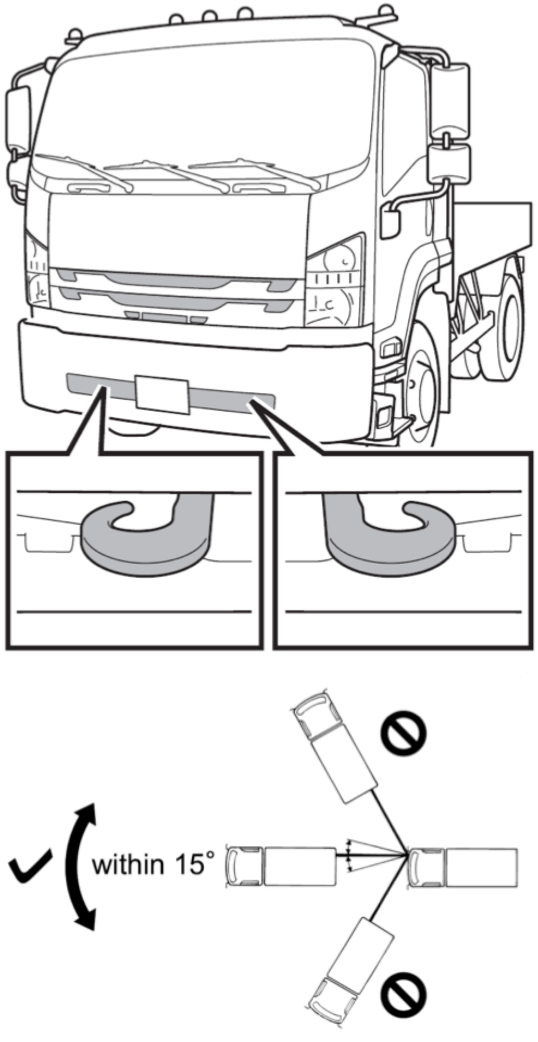


Figure 4

Weight Distribution Concepts

Weight Restrictions

The Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) of each Incomplete Vehicle are specified on the cover of its Incomplete Vehicle Document in conformance to the requirements of Part 568.4 of the Federal Motor Vehicle Safety Regulations. The final stage manufacturer is responsible under Part 567.5 to place the GVWR and the GAWR of each axle on the Final Vehicle Certification Label. The regulation states that the appropriate rating “shall not be less than the sum of the unloaded vehicle weight, rated cargo load, and 150 pounds times the vehicle’s designated seating capacity.”

Unloaded vehicle weight means the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo or occupants.

During completion of this vehicle, GVWR and GAWR may be affected in various ways, including but not limited to the following:

1. The installation of a body or equipment that exceeds the rated capacities of this Incomplete Vehicle.
2. The addition of designated seating positions which exceeds the rated capacities of this Incomplete Vehicle.
3. Alterations or substitution of any components such as axles, springs, tires, wheels, frame, steering and brake systems that may affect the rated capacities of this Incomplete Vehicle.

Use the following chart to assure compliance with the regulations. Chassis curb weight and GVW rating is located in each vehicle section. Always verify the results by weighing the completed vehicle on a certified scale.

Curb Weight of Chassis (lbs.) ____________________
(From required vehicle section)

PLUS weight of added body components, accessories or other permanently attached components. + ____________________
(Body, liftgate, reefer, etc.)

PLUS total weight of passengers, air conditioning and all load or cargo. + ____________________
(Driver, passengers, accessories and load)

EQUALS Gross Vehicle Weight (lbs.) (GVW) of completed vehicle. = ____________________
(Should equal GVWR from required vehicle section)

Figure 1

Gross Axle Weight Rating

The Gross Vehicle Weight is further restricted by the Gross Axle Weight Rating (GAWR). The maximum GAWR for both front and rear axles is listed in each Vehicle Section. Weight distribution calculations must be performed to ensure GAWR is not exceeded. Always verify the results by weighing the completed vehicle on a certified scale.

NOTE: Although the Front Gross Axle Weight Rating (FGAWR) plus the Rear Gross Axle Weight Rating (RGAWR) may exceed the Gross Vehicle Weight Rating (GVWR), the total GVW may not exceed the respective maximum GVWR.

The variation in the GAWRs allow the second stage manufacturer some flexibility in the design of the weight distribution of the attached unit.

Weighing the Vehicle

Front and rear GAWRs and total GVWR should be verified by weighing a completed loaded vehicle. Weigh the front and rear of the vehicle separately and combine the weights for the total GVWR. All three weights must be less than the respective maximum shown in the vehicle sections.

Tire Inflation

Tire inflation must be compatible with GAWR and GVWR as specified on the cover of the Incomplete Vehicle Document for each vehicle.

Center of Gravity

The design of the truck body should be such that the center of gravity of the added load does not exceed the guidelines as listed in each Vehicle Section. If the body is mounted in such a way that the center of gravity height exceeds the maximum height of the center of gravity designated for each model, the directional stability at braking and roll stability at cornering will be adversely affected. A vertical and/or horizontal center of gravity calculation must be performed if a question in stability arises to ensure the designed maximum height of the center of gravity is not violated.

Weight Distribution

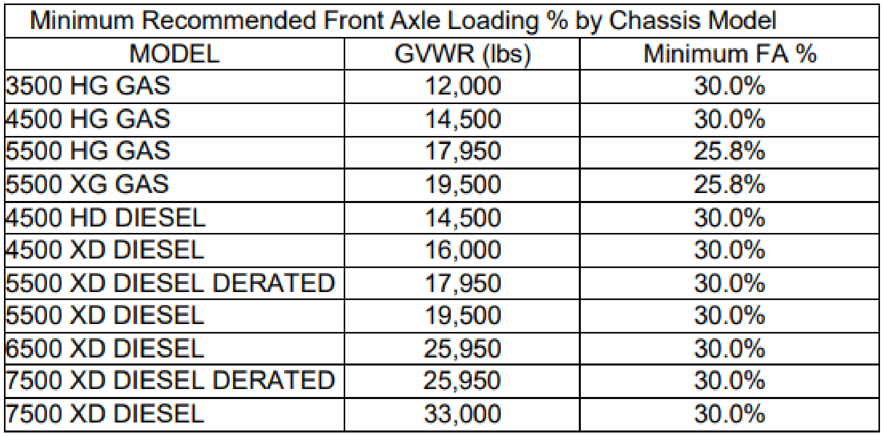
A truck as a commercial vehicle has but one purpose. That purpose is to haul some commodity from one place to another. A short distance or a long distance, the weight to be hauled, more than any other factor, determines the size of the truck. A small weight requires only a small truck; a large weight requires a large truck. A simple principle, but it can easily be misapplied. In any case, selecting the right size truck for the load to be hauled will ensure that the job will be done and that it will be able to be done with some degree of reliability and within the legal limitations of total gross weight and axle gross weights.

Not only must a truck be selected that will handle the total load, but the weight must also be properly distributed between the axles. This is of extreme importance from both a functional and economic aspect. If a truck consistently hauls less than its capacity, the owner is not realizing full return on his investment and his operating costs will be higher than they should be. If the truck is improperly loaded or overloaded, profits will be reduced due to increased maintenance costs and potential fines resulting from overloading beyond legal limitations. Careful consideration must be given to distribution of the load weight in order to determine how much of the total, including chassis, cab, body and payload, will be carried on the front axle and how much will be carried on the rear axle, on the trailer axles and the total. Moving a load a few inches forward or backward on the chassis can mean the difference between acceptable weight distribution for the truck or an application that will not do the job satisfactorily.

Every truck has a specific capacity and should be loaded so that the load distribution is kept within Gross Axle Weight Ratings (GAWR) and the truck's Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) for a tractor/trailer and the weight laws and regulations under which the truck will operate.

Another key concept in weight distribution is ensuring that the proper percentage of total vehicle weight (GVW) is distributed to each individual axle. This is typically analyzed by calculating what percentage of the total vehicle weight is being supported by the front axle. To ensure proper traction and vehicle operation, please reference the chart below for the recommended minimum front axle loading percentage by chassis model.

Minimum Recommended Front Axle Loading % by Chassis Model



Minimum Recommended Front Axle Loading % by Chassis Model

MODEL	GVWR (lbs)	Minimum FA %
3500 HG GAS	12,000	30.0%
4500 HG GAS	14,500	30.0%
5500 HG GAS	17,950	25.8%
5500 XG GAS	19,500	25.8%
4500 HD DIESEL	14,500	30.0%
4500 XD DIESEL	16,000	30.0%
5500 XD DIESEL DERATED	17,950	30.0%
5500 XD DIESEL	19,500	30.0%
6500 XD DIESEL	25,950	30.0%
7500 XD DIESEL DERATED	25,950	30.0%
7500 XD DIESEL	33,000	30.0%

An improper weight distribution will cause problems in many areas:

1. Excessive front end wear and failure
    a. Tie-rod and kingpin wear
    b. Front axle failure
    c. Overloading of front suspension
    d. Wheel bearing failure

2. Rapid tire wear - When the weight on a tire exceeds its rating capacity, accelerated wear will result and could result in tire failure.

3. Rough, erratic ride - If the center of the payload is directly over or slightly behind the rear axle, the lack of sufficient weight on the front axle will create a bobbing effect, very rough ride, and erratic steering. This condition will be magnified when the truck is going uphill.

4. Hard steering
    a. When loads beyond the capacity of the front axle are imposed upon it, the steering mechanism is also overloaded and hard steering will result.
    b. Excessive overloading could result in steering component damage or failure.

5. Unsafe operating and conditions
    c. Poor traction on the steering axle effects the safety of the driver and equipment, particularly on wet, icy and slippery surfaces. Experience indicates that approximately 30% of the total weight at the ground on a truck or tractor should be on the front axle with a low cab forward vehicle.
    d. When a truck is overloaded, a dangerous situation may exist because minimum speeds cannot always be maintained, directional control may not be precise and insufficient braking capacity can cause longer than normal braking distances.

6. High maintenance costs - Improper weight distribution and overloading cause excessive wear and premature failure of parts. Additional stresses imposed on the frame by the misapplication of wheelbases may be instrumental in causing the frame to crack or break.

7. Noncompliance with weight laws and regulations - When there is the possibility that axle loads will exceed existing weight laws and regulations, careful weight distribution is necessary to provide a correct balance between front and rear axle loads and total load within legal limitations.

In this way, maximum payloads may be carried without exceeding legal limits. If the body is too long for a wheelbase, the center of the body and payload is placed directly over the rear axle. This places all the payload on the rear axles, resulting in overloading the rear tires, rear axle springs and wheel bearings and potentially exceeding the rear axle legal weight limit. The front axle is then carrying no part of the payload and is easily lifted off the ground when going over rough terrain, creating a very rough ride and temporary loss of steering control. If the body is too short for the wheelbase used, frame stress may be increased and may result in excessive loads on the front axle. Excessive front axle loads increase wear on the kingpins and bushings, wheel bearings and steering gear. Excessive front axle loads also overstress the front axle, springs, tires and wheels. All of these contribute directly to higher maintenance costs and hard steering, both of which are undesirable.

Weight distribution analysis involves the application of basic mathematical principles to determine the proper positioning of the payload and body weight in relation to the wheelbase of the truck chassis.

It is much less expensive to work all of this out on paper, make mistakes on paper and correct them there than to set up the truck incorrectly and either have it fail to do the job or, much worse, fail completely.

It is important to become familiar with the dimensions of the truck, as these will be needed to perform the necessary calculations.

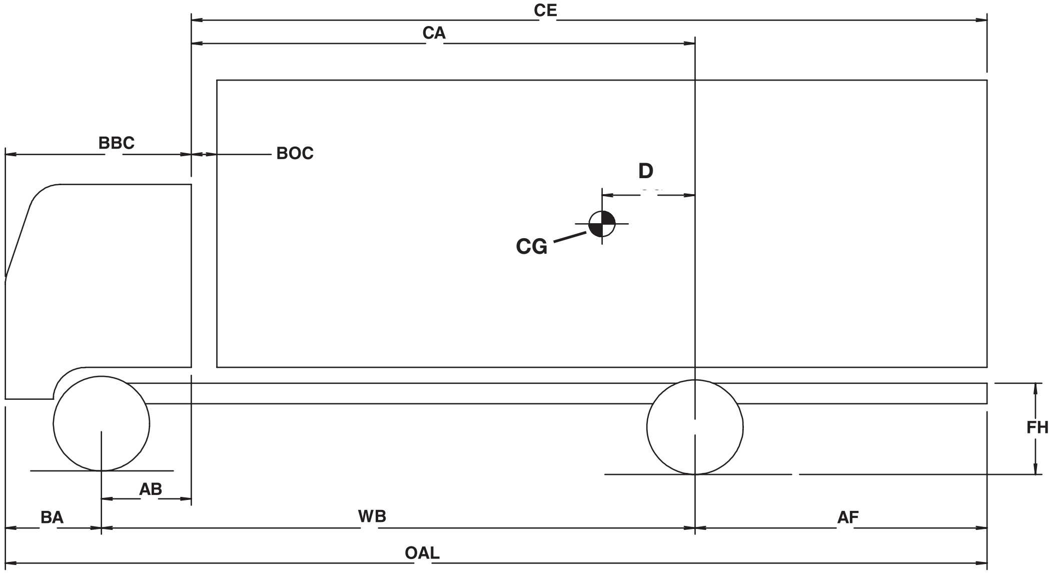


Figure 2

Glossary of Dimensions

BBC – Bumper to back of cab
BA – Bumper to axle
CA – Cab to axle
AB – Axle to back of cab
BOC – Back of cab clearance
CE – Cab to end of frame
CG – Center of gravity of body and payload
WB – Wheelbase
OAL – Overall length
AF – Axle to end of frame
FH – Frame height

(Weight Distribution Concepts Section – continued on next page)

Weight Distribution Formulas

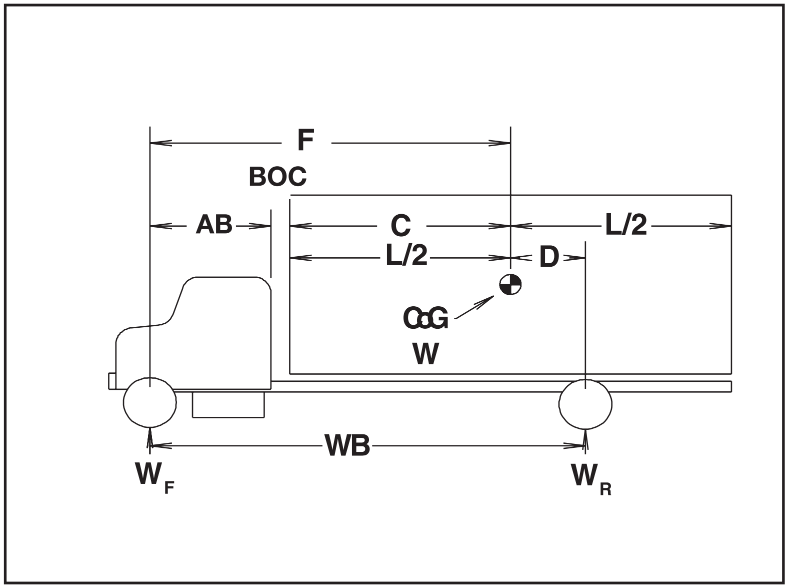


Figure 3

AB – Front axle to back of cab
BOC – Distance between cab and body or trailer
C – Front of body to C.G. or front of trailer to kingpin
D – Distance C.G. of body or fifth wheel is ahead of rear axle
F – (AB + BOC +C) or distance C.G. of weight of fifth wheel is behind front axle
WB – Wheelbase
W – Weight of body plus payload, or kingpin load
Wf – Portion of W transferred to front axle
Wr – Portion of W transferred to rear axle
C – Length of body divided by 2
L/2 – Load location at half of body length
L – Distance over which the payload is spread within the Body

Basic Formulas

(a) W x D = Wf x WB

(b) W x F = Wr x WB

or

(c) WB = (AB + BOC + C + D) = (F + D)

(d) W = Wf + Wr

1. $W_f = \frac{W \times D}{WB}$

2. $D = \frac{W_f \times WB}{W}$

3. $WB = \frac{W \times D}{W_f}$

4. $W = \frac{W_f \times WB}{D}$

5. $W_r = \frac{W \times F}{WB}$

6. $F = \frac{W_r \times WB}{W}$

7. $WB = \frac{W \times F}{W_r}$

8. $W = \frac{W_r \times WB}{F}$

Weight Distribution Formulas in Words

To find:

1. Weight transferred to front axle = $\frac{\text{(Total weight) x (Distance C.G. is ahead of the rear axle)}}{\text{(Wheelbase)}}$

2. Distance C.G. must be placed ahead of rear axle = $\frac{\text{(Weight transferred to the front axle) x (Wheelbase)}}{\text{(Total weight)}}$

3. Wheelbase = $\frac{\text{(Total weight) x (Distance C.G. is ahead of the rear axle)}}{\text{(Weight to be transferred to the front axle)}}$

4. Total Weight = $\frac{\text{(Weight to be transferred to the front axle) x (Wheelbase)}}{\text{(Distance C.G. is ahead of the rear axle)}}$

1. Weight transferred to rear axle = $\dfrac{\text{(Total weight) x (Distance C.G. is behind the front axle)}}{\text{(Wheelbase)}}$

2. Distance C.G. must be placed behind the front axle = $\dfrac{\text{(Weight transferred to the rear axle) x (Wheelbase)}}{\text{(Total weight)}}$

3. Wheelbase = $\dfrac{\text{(Total weight) x (Distance C.G. is behind the front axle)}}{\text{(Weight to be transferred to the rear axle)}}$

4. Total Weight = $\dfrac{\text{(Weight to be transferred to the rear axle) x (Wheelbase)}}{\text{(Distance C.G. is behind the front axle)}}$

9. Remember = Total weight must always equal weight transferred to the rear axle plus the weight transferred to the front axle

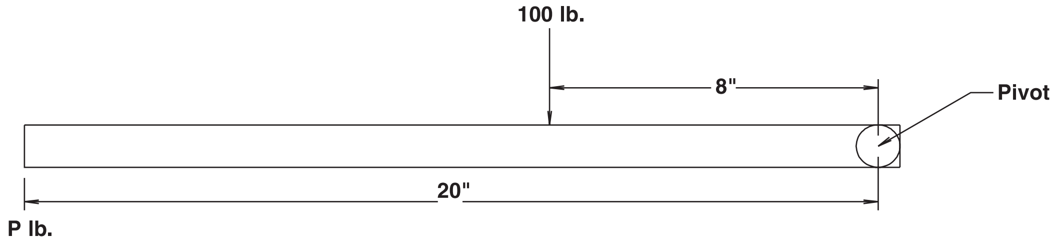


Figure 4

To find the value of “P”, the leverages must be equal for balance.

Example: 100 lbs. x 8 in. = “P” x 20 in.

or “P” = $\dfrac{\text{100 lbs. x 8 in.}}{\text{20 in.}}$

Therefore: “P” = 40 lbs.

This same approach is used to determine axle loadings on a tractor or truck chassis. Assuming the rear axle serves as a pivot point, the front axle load can be determined by applying the lever principle.

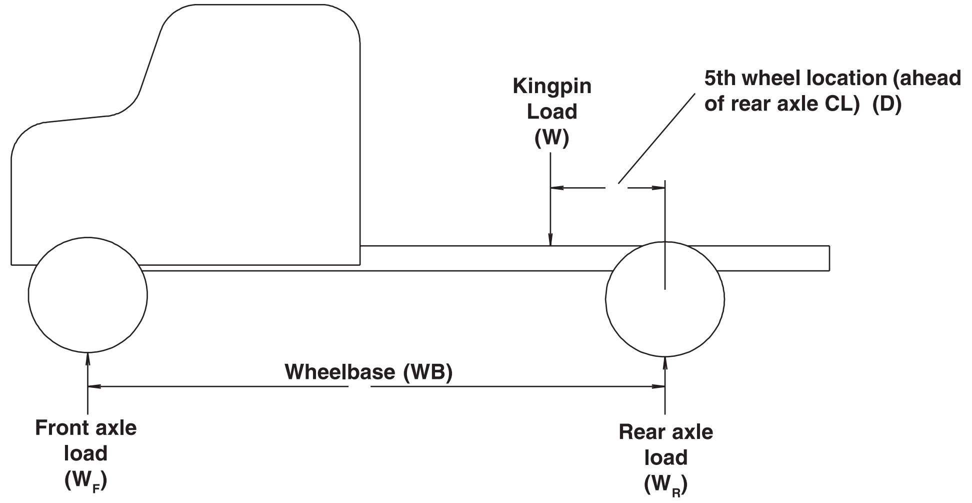

Kingpin Load (W)
5th wheel location (ahead of rear axle CL) (D)
Wheelbase (WB)
Front axle load (W_F)
Rear axle load (W_R)

Figure 5

Front Axle Load: = $\frac{\text{Kingpin Load x 5th Wheel Location}}{\text{Wheelbase}}$

Rear Axle Load: = Kingpin Load – Front Axle Load

Example: (4) A tractor has a wheelbase of 150 inches. If the kingpin load is 20,000 lbs. and the fifth wheel location is 15 inches, find the total weight on the front and rear axles. The tare weight of the tractor is 7,000 lbs. on the front axle and 4,400 lbs. on the rear axle.

Front Axle Load = $\frac{20{,}000 \times 15}{150 \text{ WB}}$ = 2,000 lbs.

Rear Axle Load = 2,000 + 7,000 lbs. = 9,000 lbs.

Therefore:
Total Front Axle Weight = 2,000 + 9,000 lbs. = 11,000 lbs.
Total Rear Axle Weight = 4,400 + 18,000 lbs. = 22,400 lbs.

In calculating the weight distribution for a truck, the same lever principle is applied; however, there is one change in the initial consideration of the method of loading the truck body. Instead of the trailer kingpin location ahead of the rear axle centerline, we must determine the position of the center of gravity of the payload and body weight in relation to the rear axle centerline.

For our calculations, we assume that the payload is distributed in the truck body so that the load is supported evenly over the truck body floor (water-level distribution). The weight of the body itself is also considered to be evenly distributed along the truck frame. In this manner, we can add the payload and body weights together and calculate the distribution on the vehicle chassis as an evenly distributed load on the truck frame rails.

So that we can make the necessary calculation in a simple manner, the total body and payload weight is considered to act at the center of gravity which will be at the center of the body length.

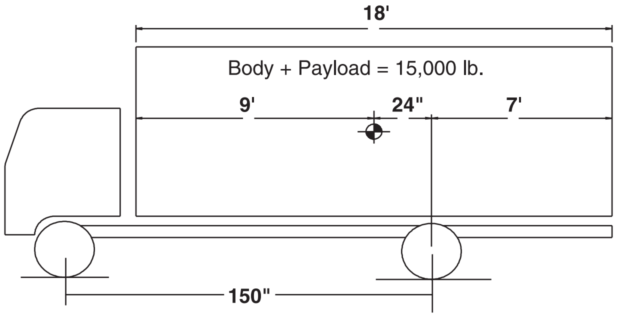


Figure 6

Example:

Front Axle Load =

$$\frac{\text{(Body Weight + Payload) x C of G location}}{\text{Wheelbase}}$$

Rear Axle Load =

(Body Weight + Payload) – Front Axle Load

Therefore, Front Axle Load =

$$\frac{15{,}000 \times 24}{150} = 2{,}400 \text{ lbs.}$$

Rear Axle Load = 15,000 – 2,400 = 12,600 lbs.

If the truck tare weight without the body is 5,000 lbs. on the front axle and 2,400 lbs. on the rear axle, then
Total Front Axle Weight = 5,000 + 2,400 = 7,400 lbs. and
Total Rear Axle Weight = 2,400 + 12,600 = 15,000 lbs.

This same lever principle is applied in all calculations of weight distribution, whether we are dealing with concentrated loads as with a kingpin load acting on a fifth wheel or if it be with an evenly distributed load as with a truck body. The same approach is made in calculating an evenly distributed load on a trailer.

In the case of a tractor/trailer or a tractor with a set of double or triple trailers, each unit is handled as a separated unit and then combined to determine the total.

This simple example illustrates how the principles are applied. Using the formulas, find the weight distributed to each axle.

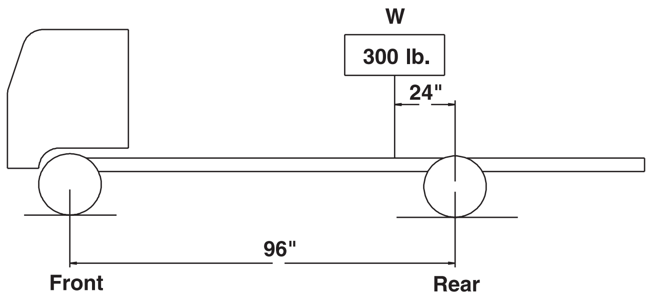
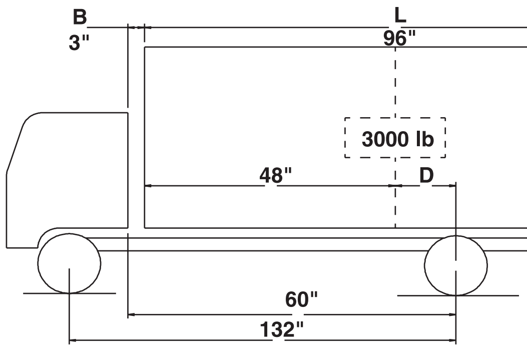


Figure 7

	Front Weight		**Rear Weight**
A.	$Wf = \frac{W \times D}{WB}$	A.	W – Wf
B.	$\frac{300 \times 24}{96}$	B.	300 – 75
C.	= 75 lbs.	C.	= 225 lbs.

The body manufacturer can provide the body length and weight, or actual measurements of the body may be taken with a tape.
Generally, (D) is unknown. This you must find logically, or with a tape measure.

Find (D) and then solve for Wf and Wr.


B
3"
L
96"
3000 lb
48"
D
60"
132"

D = 60–3–48 = 9 in.

W_f = 205

W_r = 2,795

Figure 8

Recommended Weight Distribution % of Gross Vehicle Weight by Axle

Conventional (2 Axle)

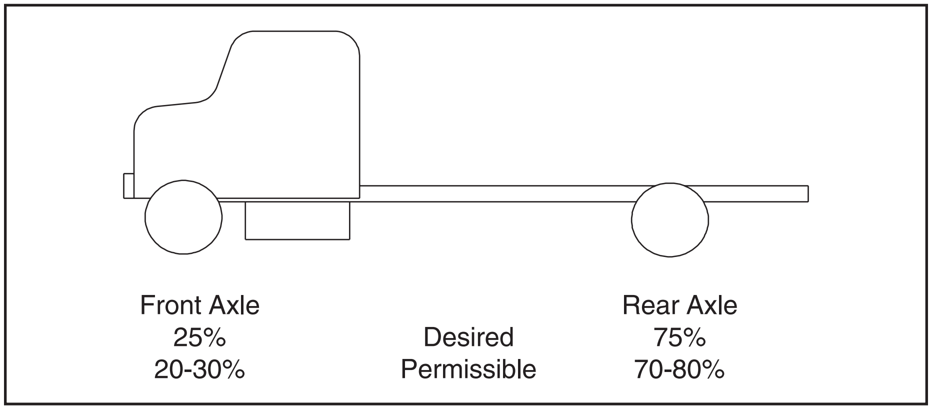

Front Axle
25%
20-30%
Desired
Permissible
Rear Axle
75%
70-80%

Figure 9

COE (2 Axle)

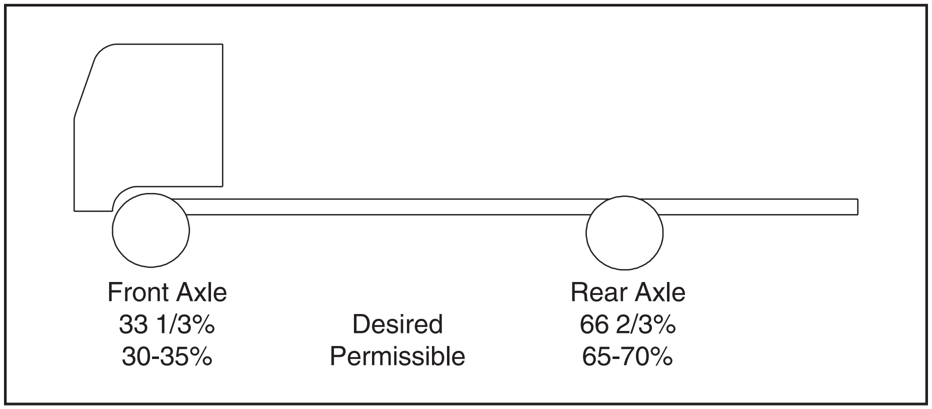

Front Axle
33 1/3%
30-35%
Desired
Permissible
Rear Axle
66 2/3%
65-70%

Figure 10

Conventional (3 Axle)

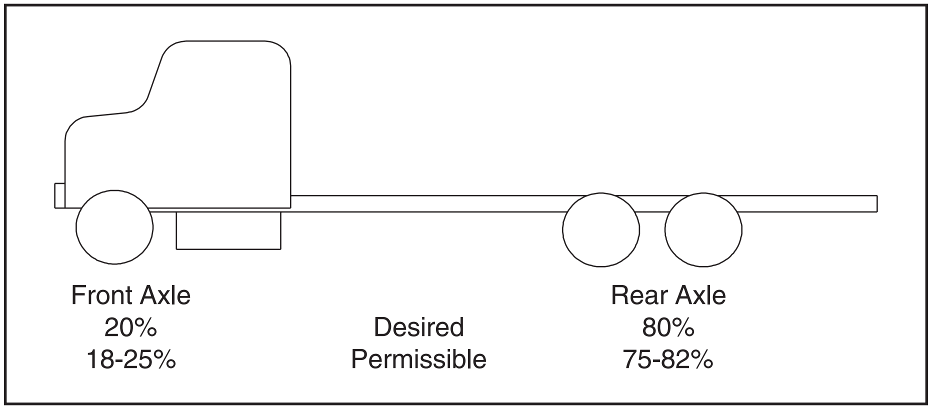

Front Axle
20%
18-25%
Desired
Permissible
Rear Axle
80%
75-82%

Figure 11

COE (3 Axle)

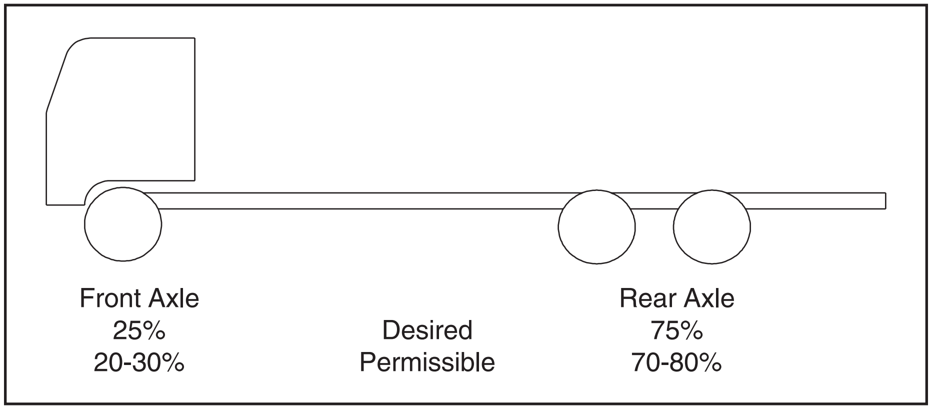
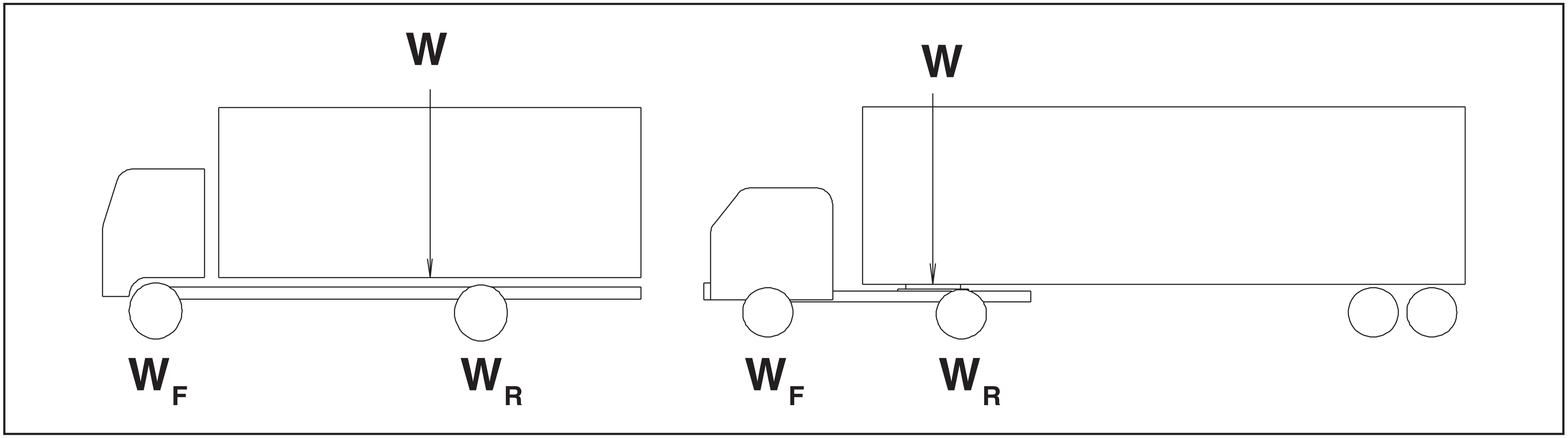

Front Axle
25%
20-30%
Desired
Permissible
Rear Axle
75%
70-80%

Figure 12

Calculating tractor/trailer weight distribution can be thought of in the same terms as calculating full trucks.


W
W
W_F
W_R
W_F
W_R

The weight at the center of the body and the load when applied is the same as the single point load of the kingpin on the fifth wheel.

Figure 13

Trailer Weight

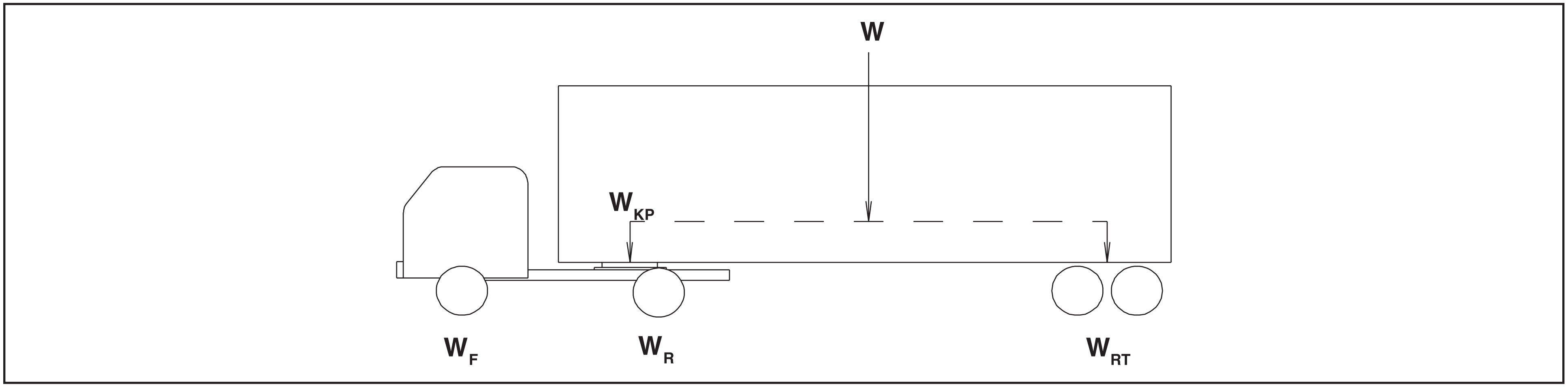

W
W_{KP}
W_F
W_R
W_{RT}

Figure 14

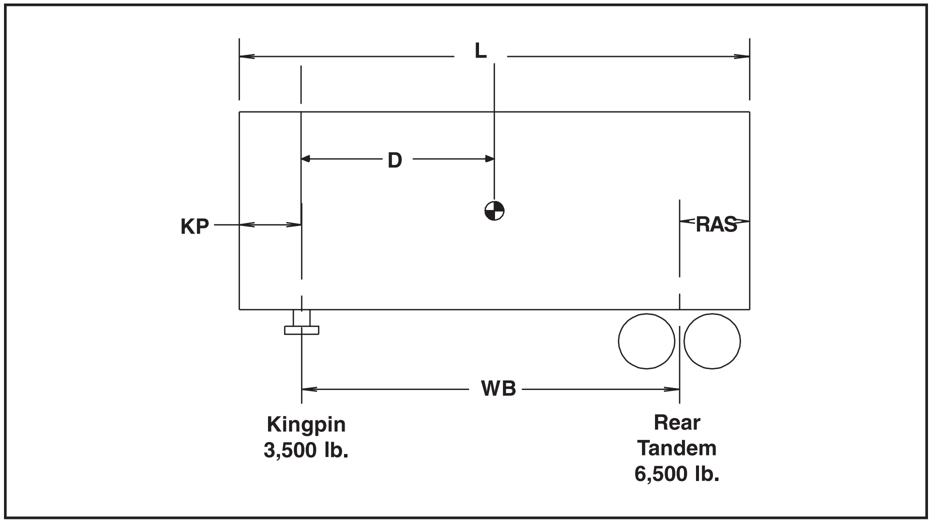

L
D
KP
RAS
WB
Kingpin
3,500 lb.
Rear
Tandem
6,500 lb.

Figure 15

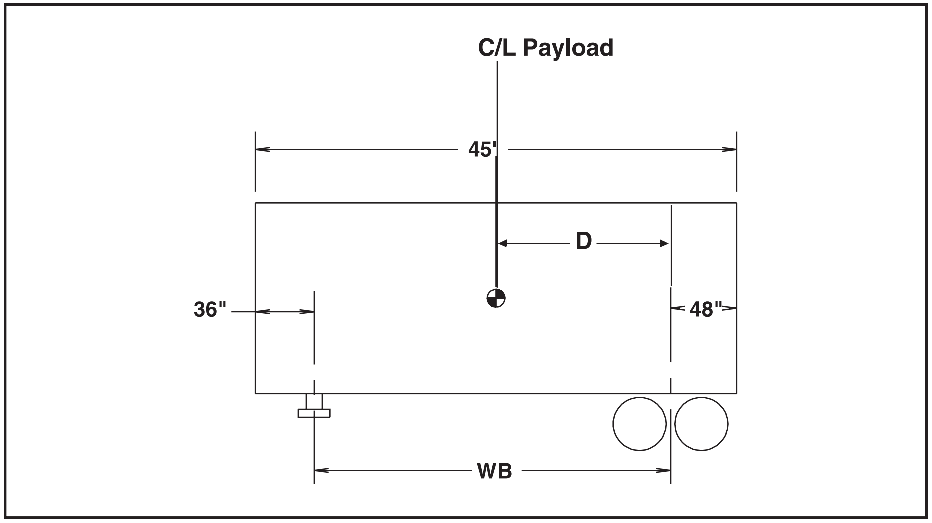

C/L Payload
45'
D
36"
48"
WB

Figure 16

In the following example, a 50,000-pound payload at water-level loading. Calculate the payload (PL) weight transfer to kingpin and the rear axle.

NOTE: Apply the same principles used with truck chassis.

Payload at Kingpin

$$\mathbf{PL_{kp} = \frac{W \times D}{WB}}$$

Calculate the "D" dimension.

OAL/2 – AF = D
45 feet/2 – 48 inches – 36 inches = 186 inches

$$PL_{kp} = \frac{\underline{50{,}000 \text{ lbs.} \times 186 \text{ in.}}}{456 \text{ in.}} = 20{,}394 \text{ lbs.}$$

$\mathbf{PL_{kp} = 20{,}394 \text{ lbs.}}$

Payload at Rear Tandem

$\mathbf{PL_{rt} = W - PL_{kp}}$

$PL_{rt} = 50{,}000 \text{ lbs.} - 20{,}394 \text{ lbs.} = 29{,}606 \text{ lbs.}$

$\mathbf{PL_{rt} = \underline{29{,}606 \text{ lbs.}}}$

Once the weight on the kingpin is determined, it can then be treated on the tractor the same as a weight on a straight truck.

Due to the variations in hauling and wheelbase requirements from one truck application to another, there is no one specific fifth wheel setting that will apply in all cases.

A "rule of thumb" which has proven satisfactory in many cases sets the fifth wheel one inch ahead of the rear axle for every 10 inches of wheelbase. In the case of tandem axles, the wheelbase is measured from the center line of the front axle to the midpoint between the tandem rear axles. The location of the fifth wheel fixes the load distribution between the front and rear axles. Too far forward and the front axle is overloaded. If too far back, the front axle may be too lightly loaded and cause an unsafe steering and braking control situation at the front axle.

(Weight Distribution Concepts Section – continued from previous page)

A tractor on a hill with the fifth wheel set at the axle center line or too close to it will result in an unsafe handling situation by transferring too much weight to the rear axle and actually unloading the front axle.

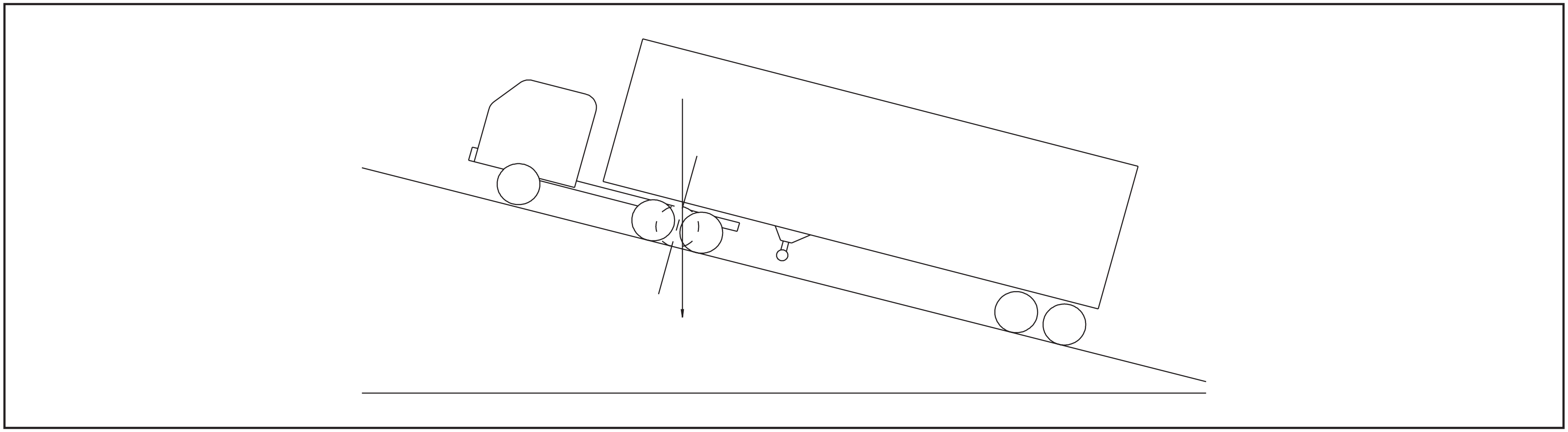


Figure 17

Performance Calculations

The following calculations have been included to help you determine the performance characteristics required by your customers and to select the appropriate model vehicle:

1. Speed Formula

This formula can be used to determine:

1. Top speed of the vehicle.

2. Speed in a given gear.

3. Final ratio required for a given speed.

MPH @ Governed Speed = $\dfrac{\textbf{(60) x (RPM)}}{\textbf{(Rev/Mile) x (Gear Ratio)}}$

Definitions in formula:

RPM = Revolutions per minute of the engine at Governed Speed
Rev/Mile = Tire revolutions per mile
Gear Ratio = The product of the axle ratio times the transmission ratio
60 = Time Constant

Example: LCF 12,000 GVWR automatic transmission.

RPM = 3,000
Rev/Mile = 674
Gear Ratio = .703 x 5.375

$$\textbf{MPH @ Governed Speed} = \frac{(60) \times (3{,}000)}{(674) \times (.703 \times 5.375)}$$

MPH @ Governed Speed = 70 MPH

2. Grade Horsepower Formula

This formula can be used to determine horsepower required for a given grade and speed.

$$\textbf{Horsepower Req'd. for a given grade} = \frac{\textbf{GVWR x Grade x Speed}}{\textbf{37,500 x Efficiency Factor}} + \textbf{AHP}$$

Definitions in formula:

GVWR = Gross Vehicle Weight Rating
Grade = Grade anticipated in percent
Speed = Speed in miles per hour
37,500 = Constant
Efficiency Factor = Factor for losses in drivetrain due to friction (use 0.9 for a 90% efficient driveline)
AHP Resistance = Horsepower required to overcome wind force

Example: LCF 11,050 GVWR automatic transmission with a van body.

GVWR = 12,000 lbs.
Grade = 1 percent
Speed = 55 MPH
37,500 = Constant
Efficiency Factor = 0.9
AHP Resistance = 53.6 HP (see the following formula for calculation)

HP Required for Grade =

$$\frac{12{,}000 \times 1 \times 55}{37{,}500 \times 0.9} + 53.67$$

HP Required for Grade = 73.22

*3. Air Resistance Horsepower Formul*a

This formula is used to determine the horsepower required to overcome air resistance at a given speed.

Air Resistance Horsepower =

$$\frac{FA \times Cd \times (MPH)^3}{156{,}000}$$

Definitions in formula:

FA = Frontal area of vehicle in square feet
Cd = Aerodynamic Drag Coefficient
MPH = Speed of vehicle in miles per hour
156,000 = Constant

Frontal area is calculated by multiplying the height of the vehicle by the width of the vehicle and subtracting the open area under the vehicle from the total.

Aerodynamic Drag Coefficients (Source Material: Motor Truck Engineering Handbook):

0.70	for most trucks, semitrailer combinations with tanks or van bodies
0.77	for double and triple trailers and flatbeds with loads

Example: LCF 12,000 GVWR van body with 96” wide, 115” high (84” body height + 31” frame height).

$$\mathbf{FA} = \frac{(96) \times (115)}{(12) \times (12)} - 3.2$$

FA = 73.47 ft.2
Cd = 0.70
Speed = 55 mph

$$\text{Air Resistance HP} = \frac{73.47 \times 0.70 \times (55)^3}{156{,}000}$$

Air Resistance HP = 54.85

4. Engine Horsepower Formula

This formula can be used to derive the output at a given RPM and torque.

$$\textbf{Horsepower} = \frac{\textbf{Torque x RPM}}{\textbf{5,252}}$$

Definitions in formula:

Torque = Twisting output of engine given in lbs.-ft.
RPM = Revolutions per minute of engine
5,252 = Constant

Example: LCF 12,000 GVWR automatic transmission.

Torque = 347 lbs.-ft.
RPM = 2,000

$$132 \text{ HP} = \frac{(347) \times (2{,}000)}{5{,}252}$$

5. Gradeability Formula

This formula can be used to determine how large of a grade a vehicle can climb.

$$\textbf{Percent Grade} = \frac{1{,}200 \times (T) \times (E) \times (C) \times (R)}{GVWR \times r} - RR$$

Definitions in formula:

1,200 = Constant
T = Maximum Torque of Engine
E = Engine Efficiency (0.9)
C = Driveline Efficiency (0.9)
R = Transmission Ration x Axle Ratio
RR = Rolling Resistance (see following chart)
GVWR = Gross Vehicle Weight Rating
r = Loaded radius of tire

Example: LCF 12,000 GVWR automatic transmission on concrete highway.

T = 347 lbs.-ft.
E = 0.9
C = 0.9
R = .703 x 5.375 (in overdrive)
RR = 1.0
GVWR = 12,000
r = 14.1 in.

$$\textbf{Percent Grade} = \frac{1{,}200 \times (347) \times (0.9) \times (0.9) \times (.703) \times (5.375)}{12{,}000 \times 14.1} - 1.0$$

Percent Grade = 7.53 - 1

Gradeability = 6.53%

Road Rolling Resistance			
Road Rolling Resistance – Expressed in Percent Grade			
Road Surface	**Grade Road**	**Surface**	**Grade**
Concrete, excellent	1.0	Cobbles, ordinary	5.5
Concrete, good	1.5	Cobbles, poor	8.5
Concrete, poor	2.0	Snow, 2 inches	2.5
Asphalt, good	1.25	Snow, 4 inches	3.75
Asphalt, fair	1.75	Dirt, smooth	2.5
Asphalt, poor	2.25	Dirt, sandy	3.75
Macadam, good	1.5	Mud	3.75 to 15.0
Macadam, fair	2.25	Sand, level soft	6.0 to 15.0
Macadam, poor	3.75	Sand, dune	16.0 to 30.0

Figure 19

6. Startability Formula

This formula is used to determine what type of a grade a vehicle can be started on.

$$\text{Startability} = \frac{(1{,}200) \times (CET) \times (E) \times (C) \times (R)}{(GVWR \times r)} - 10\%$$

Definitions in formula:

1,200 = Constant
CET = Clutch Engagement Torque
E = 0.9
C = 0.9
R = Transmission x Axle Ratio
10% = Average break away resistance and static inertia constant
GVWR = Gross Vehicle Weight Rating
r = Loaded radius of tire

Example: LCF 12,000 GVWR manual transmission.

CET = 260 lbs.-ft.
R = 6.02 x 4.10
GVWR = 12,000 lbs.
r = 14.1 in.

$$\text{Startability} = \frac{(1{,}200) \times (260) \times (0.9) \times (0.9) \times (6.02 \times 4.10)}{(12{,}000 \times 14.1)} - 10\%$$

Startability = 26.86%

7. Vertical Center of Gravity Formula

These formulas are used to estimate the vertical center of gravity of a completed vehicle in order to determine whether maximum allowable limits have been exceeded. This formula should be used when encountering high center of gravity loads.

7.1 Wv x (Vv) = Mv
7.2 Wb x (Vb) = Mb
7.3 Wp x (Vp) = Mp
7.4 We x (Ve) = Me

$$7.5\ \mathbf{VCg} = \frac{\mathbf{(Mv+ Mb+Mp+Me)}}{\mathbf{(Wv + Wb + Wp + We)}}$$

Definitions in formula:

VCg = The total average vertical center of gravity of the completed vehicle (vehicle, body, payload and equipment)
Wv = Weight of vehicle
Wb = Weight of body
Wp = Weight of payload
We = Weight of equipment

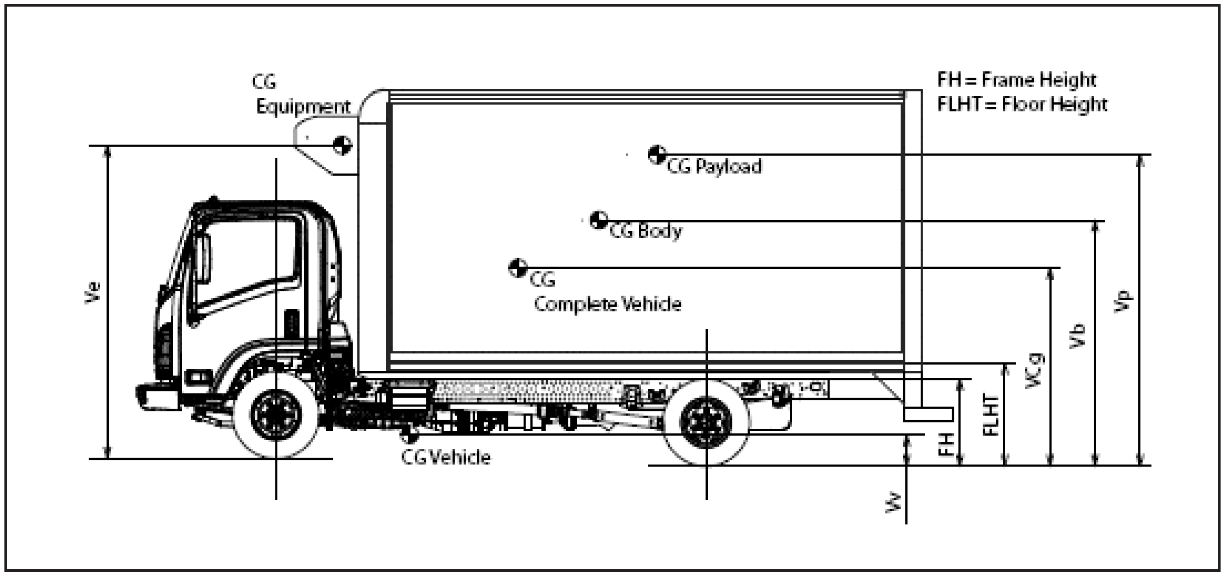

CG
Equipment
FH = Frame Height
FLHT = Floor Height
CG Payload
CG Body
CG
Complete Vehicle
Ve
Vb
Vp
VCg
FLHT
FH
Vv
CG Vehicle

Figure 20

Definitions in formula (continued):

Vv = Distance from ground to center of gravity of the vehicle
Vb = Distance from ground to center of gravity of the body
Vp = Distance from ground to center of gravity of the payload
Ve = Distance from ground to center of gravity of the equipment
Mv = Moment of vehicle
Mb = Moment of body
Mp = Moment of payload
Me = Moment of equipment

Example: LCF 12,000 GVWR automatic transmission, 132” WB, 14’ body length, 84” high body, full payload of boxes stacked to a maximum height of 48” above the flooring.

Wv = 5,291 lbs. (from vehicle specifications)
Wb = 2,100 lbs. (from body manufacturer)
Wp = 4,609 lbs. (GVWR – (Wv + Wb + We)
Vv = 24.9 in. (from Body Builder’s Guide, LCF Section)
Vb = 80 in. (from body manufacturer)
Vp = 62 in. (1/2 of payload height + frame height + height from frame to flooring)
Mv = 5,291 x 24.9 = 131,746 lbs.-in. (from 7.1)
Mb = 2,100 x 80 = 168,000 lbs.-in. (from 7.2)
Mp = 4,609 x 62 = 285,758 lbs.-in. (from 7.3)

We, Ve, Me = None in this example

$$\text{VCg} = \frac{(131{,}746+168{,}000+285{,}758)}{(5{,}291 + 2{,}100 + 4{,}609)}$$

$$\text{VCg} = \frac{(528{,}504)}{(12{,}000)} = 48.8 \text{ inches}$$

8. Horizontal Center of Gravity Formula

These formulas are used to estimate the horizontal center of gravity of a completed vehicle in order to determine whether it exists between the centerlines of the front and rear axles. This formula should be used when a load and/or permanent equipment (liftgate, reefer unit, snowplow, etc.) is installed on either extreme along the completed vehicle's overall length.

8.1 $Wv \times (Hv) = Mv$

8.2 $Wb \times (Hb) = Mb$

8.3 $Wp \times (Hp) = Mp$

8.4 $We \times (He) = Me$

8.5 $$HCg = \frac{(Mv+Mb+Mp+Me)}{(Wv + Wb + Wp + We)}$$

Definitions in formula:

HCg = The total average horizontal center of gravity of the completed vehicle (vehicle, body, payload and equipment)
Wv = Weight of vehicle
Wb = Weight of body
Wp = Weight of payload
We = Weight of equipment
Hv = Distance from front axle to center of gravity of the vehicle
Hb = Distance from front axle to center of gravity of the body
Hp = Distance from front axle to center of gravity of the payload
He = Distance from front axle to center of gravity of the equipment
Mv = Moment of vehicle
Mb = Moment of body
Mp = Moment of payload
Me = Moment of equipment

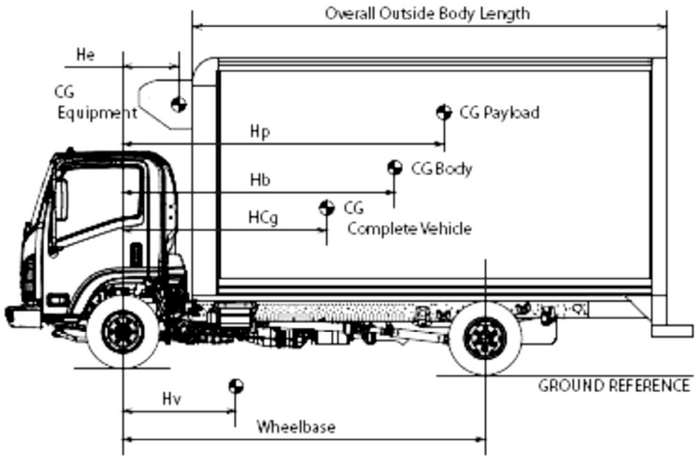

Overall Outside Body Length
He
CG
Equipment
CG Payload
Hp
CG Body
Hb
HCg
CG
Complete Vehicle
GROUND REFERENCE
Hv
Wheelbase

Figure 21

Example: LCF Diesel 12,000 GVWR automatic transmission, 132” WB, 14’ body length, full payload of boxes stacked and distributed evenly throughout the flooring, 1,000 lb. reefer unit attached in front of body.

Wv = 5,291 lbs. (from vehicle specifications)
Wb = 2,100 lbs. (from body manufacturer)
Wp = 3,609 lbs. (GVWR – (Wv + Wb + We))
We = 1,000 lbs. (from equipment manufacturer)
Hv = 42.4 in. (from Body Builder’s Guide, LCF Section)
Hb = 107.5 in. (from body manufacturer)
Hp* = 107.5 in. (1/2 of payload length + distance from front axle to front of body)
He = 17.5 in. (from equipment manufacturer)
Mv = 5,291 x 42.4 = 224,338 lbs.-in. (from 8.1)
Mb = 2,100 x 107.5 = 225,750 lbs.-in. (from 8.2)
Mp = 3,609 x 107.5 = 387,967 lbs.-in. (from 8.3)
Me = 1,000 x 17.5 = 17,500 lbs.-in. (from 8.4)

$$\text{HCg} = \frac{(224{,}338 + 225{,}750 + 387{,}967 + 17{,}500)}{(5{,}291 + 2{,}100 + 3{,}609 + 1{,}000)}$$

$$\text{HCg} = \frac{(855{,}555)}{(12{,}000)} = 71.3 \text{ inches}$$

71.3 < 132 inches (132 inches is the wheelbase dimension)

Since HCg for this truck is not greater than the WB or negative (–) (denotes HCg forward of front axle centerline), it exists between the centerlines of the front and rear axles.

NOTE: Hp and Hb dimensions are the same in this example because CG of body and payload happen to be at the same point.

Note

The Federal Highway Administration (FHWA) revises its guidance pamphlet *Bridge Formula Weights* (August 2006). Specifically, the note on the last page of the pamphlet is superseded and replaced with the following: "This guidance pamphlet paraphrases provisions of 23 U.S.C. § 127 and 23 C.F.R. § 658 for purposes of illustration only. In the event of a dispute, the statute and regulation take precedence with respect to maximum allowable Federal Bridge Formula weights. Previous editions of this guidance pamphlet are superseded and no longer valid."

U.S. Department of Transportation
Federal Highway Administration

Office of Freight Management and Operations
Phone: 202-366-9210
Fax: 202-366-3302
Web site: http://www.ops.fhwa.dot.gov/freight

August 2006

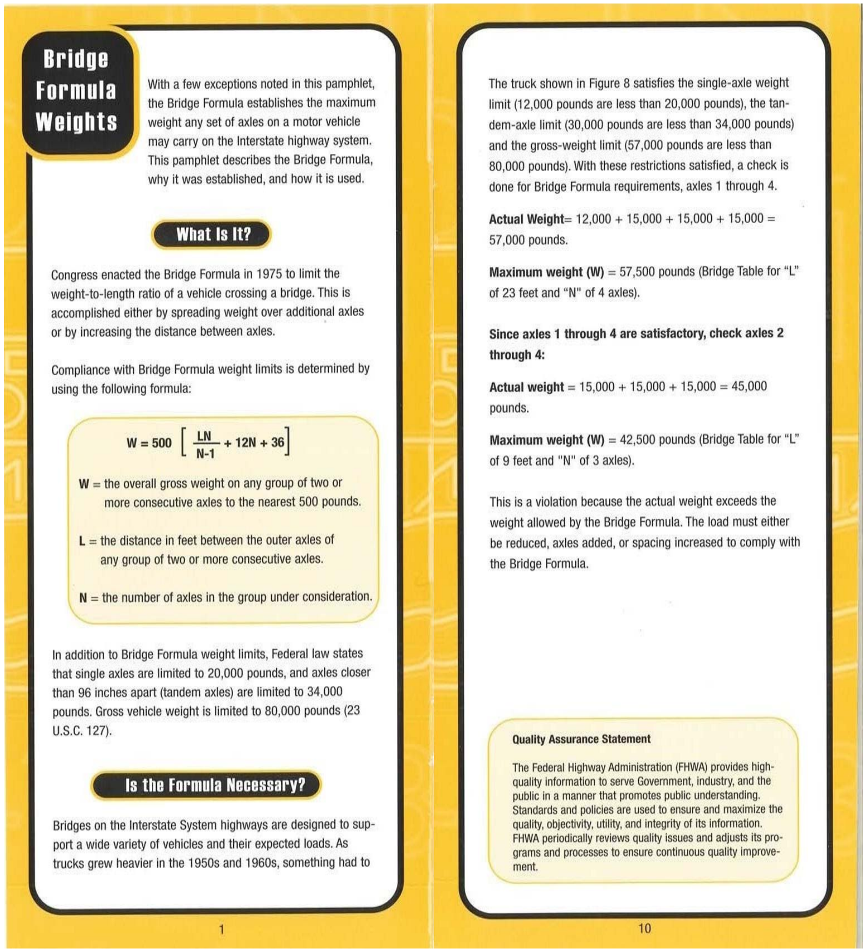
FHWA-HOP-06-105

Bridge Formula Weights

August 2006

Revised May 2015

U.S. Department of Transportation
Federal Highway Administration



Bridge Formula Weights

With a few exceptions noted in this pamphlet, the Bridge Formula establishes the maximum weight any set of axles on a motor vehicle may carry on the Interstate highway system. This pamphlet describes the Bridge Formula, why it was established, and how it is used.

What Is It?

Congress enacted the Bridge Formula in 1975 to limit the weight-to-length ratio of a vehicle crossing a bridge. This is accomplished either by spreading weight over additional axles or by increasing the distance between axles.

Compliance with Bridge Formula weight limits is determined by using the following formula:

$$W = 500 \left[\frac{LN}{N-1} + 12N + 36 \right]$$

W = the overall gross weight on any group of two or more consecutive axles to the nearest 500 pounds.

L = the distance in feet between the outer axles of any group of two or more consecutive axles.

N = the number of axles in the group under consideration.

In addition to Bridge Formula weight limits, Federal law states that single axles are limited to 20,000 pounds, and axles closer than 96 inches apart (tandem axles) are limited to 34,000 pounds. Gross vehicle weight is limited to 80,000 pounds (23 U.S.C. 127).

Is the Formula Necessary?

Bridges on the Interstate System highways are designed to support a wide variety of vehicles and their expected loads. As trucks grew heavier in the 1950s and 1960s, something had to

1

The truck shown in Figure 8 satisfies the single-axle weight limit (12,000 pounds are less than 20,000 pounds), the tandem-axle limit (30,000 pounds are less than 34,000 pounds) and the gross-weight limit (57,000 pounds are less than 80,000 pounds). With these restrictions satisfied, a check is done for Bridge Formula requirements, axles 1 through 4.

Actual Weight= 12,000 + 15,000 + 15,000 + 15,000 = 57,000 pounds.

Maximum weight (W) = 57,500 pounds (Bridge Table for "L" of 23 feet and "N" of 4 axles).

Since axles 1 through 4 are satisfactory, check axles 2 through 4:

Actual weight = 15,000 + 15,000 + 15,000 = 45,000 pounds.

Maximum weight (W) = 42,500 pounds (Bridge Table for "L" of 9 feet and "N" of 3 axles).

This is a violation because the actual weight exceeds the weight allowed by the Bridge Formula. The load must either be reduced, axles added, or spacing increased to comply with the Bridge Formula.

Quality Assurance Statement

The Federal Highway Administration (FHWA) provides high-quality information to serve Government, industry, and the public in a manner that promotes public understanding. Standards and policies are used to ensure and maximize the quality, objectivity, utility, and integrity of its information. FHWA periodically reviews quality issues and adjusts its programs and processes to ensure continuous quality improvement.

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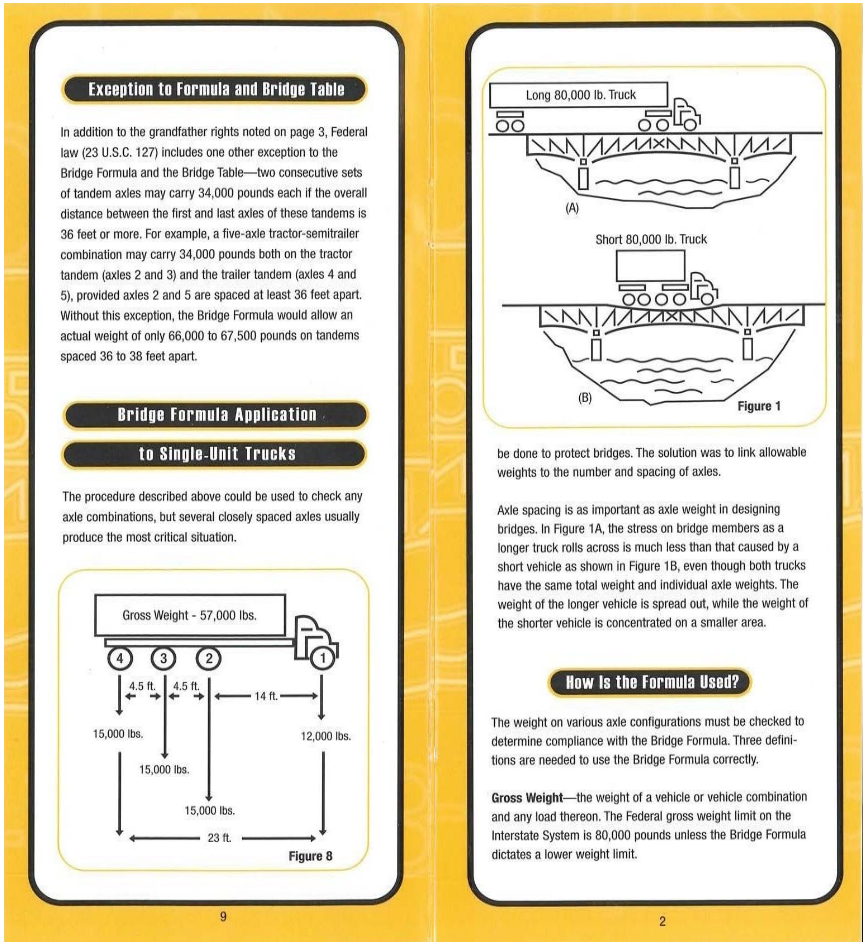


Exception to Formula and Bridge Table

In addition to the grandfather rights noted on page 3, Federal law (23 U.S.C. 127) includes one other exception to the Bridge Formula and the Bridge Table—two consecutive sets of tandem axles may carry 34,000 pounds each if the overall distance between the first and last axles of these tandems is 36 feet or more. For example, a five-axle tractor-semitrailer combination may carry 34,000 pounds both on the tractor tandem (axles 2 and 3) and the trailer tandem (axles 4 and 5), provided axles 2 and 5 are spaced at least 36 feet apart. Without this exception, the Bridge Formula would allow an actual weight of only 66,000 to 67,500 pounds on tandems spaced 36 to 38 feet apart.

Bridge Formula Application to Single-Unit Trucks

The procedure described above could be used to check any axle combinations, but several closely spaced axles usually produce the most critical situation.

Figure 8

Figure 1

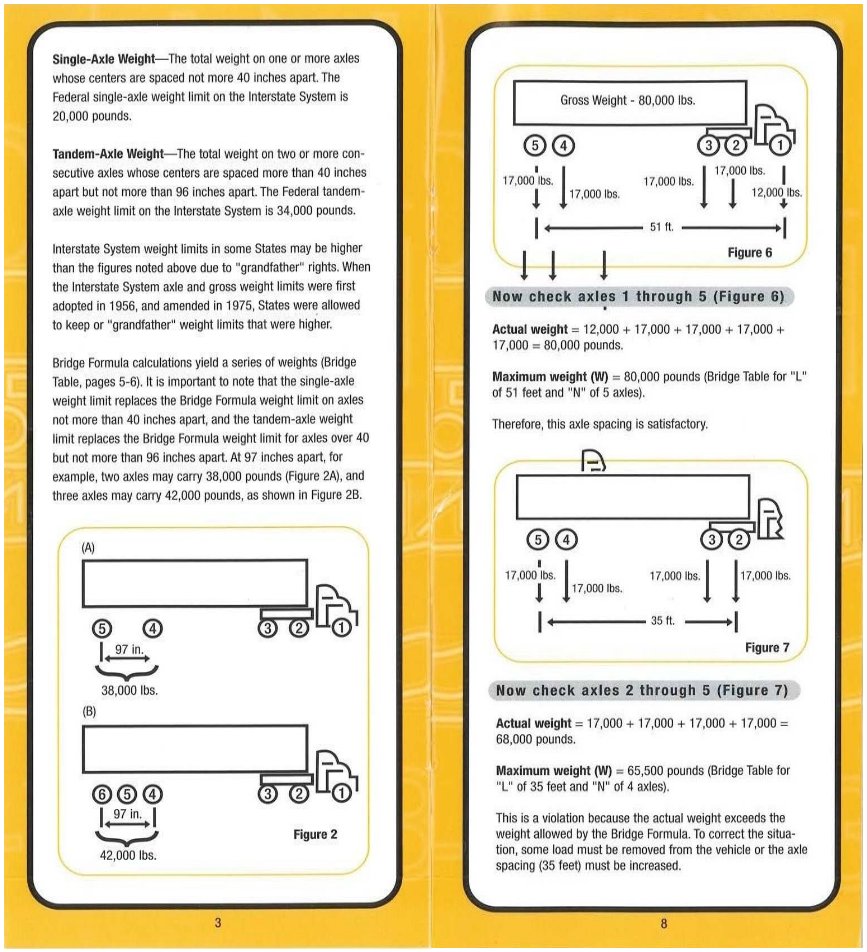
be done to protect bridges. The solution was to link allowable weights to the number and spacing of axles.

Axle spacing is as important as axle weight in designing bridges. In Figure 1A, the stress on bridge members as a longer truck rolls across is much less than that caused by a short vehicle as shown in Figure 1B, even though both trucks have the same total weight and individual axle weights. The weight of the longer vehicle is spread out, while the weight of the shorter vehicle is concentrated on a smaller area.

How Is the Formula Used?

The weight on various axle configurations must be checked to determine compliance with the Bridge Formula. Three definitions are needed to use the Bridge Formula correctly.

Gross Weight—the weight of a vehicle or vehicle combination and any load thereon. The Federal gross weight limit on the Interstate System is 80,000 pounds unless the Bridge Formula dictates a lower weight limit.



Single-Axle Weight—The total weight on one or more axles whose centers are spaced not more 40 inches apart. The Federal single-axle weight limit on the Interstate System is 20,000 pounds.

Tandem-Axle Weight—The total weight on two or more consecutive axles whose centers are spaced more than 40 inches apart but not more than 96 inches apart. The Federal tandem-axle weight limit on the Interstate System is 34,000 pounds.

Interstate System weight limits in some States may be higher than the figures noted above due to "grandfather" rights. When the Interstate System axle and gross weight limits were first adopted in 1956, and amended in 1975, States were allowed to keep or "grandfather" weight limits that were higher.

Bridge Formula calculations yield a series of weights (Bridge Table, pages 5-6). It is important to note that the single-axle weight limit replaces the Bridge Formula weight limit on axles not more than 40 inches apart, and the tandem-axle weight limit replaces the Bridge Formula weight limit for axles over 40 but not more than 96 inches apart. At 97 inches apart, for example, two axles may carry 38,000 pounds (Figure 2A), and three axles may carry 42,000 pounds, as shown in Figure 2B.

Figure 2

3

Figure 6

Now check axles 1 through 5 (Figure 6)

Actual weight = 12,000 + 17,000 + 17,000 + 17,000 + 17,000 = 80,000 pounds.

Maximum weight (W) = 80,000 pounds (Bridge Table for "L" of 51 feet and "N" of 5 axles).

Therefore, this axle spacing is satisfactory.

Figure 7

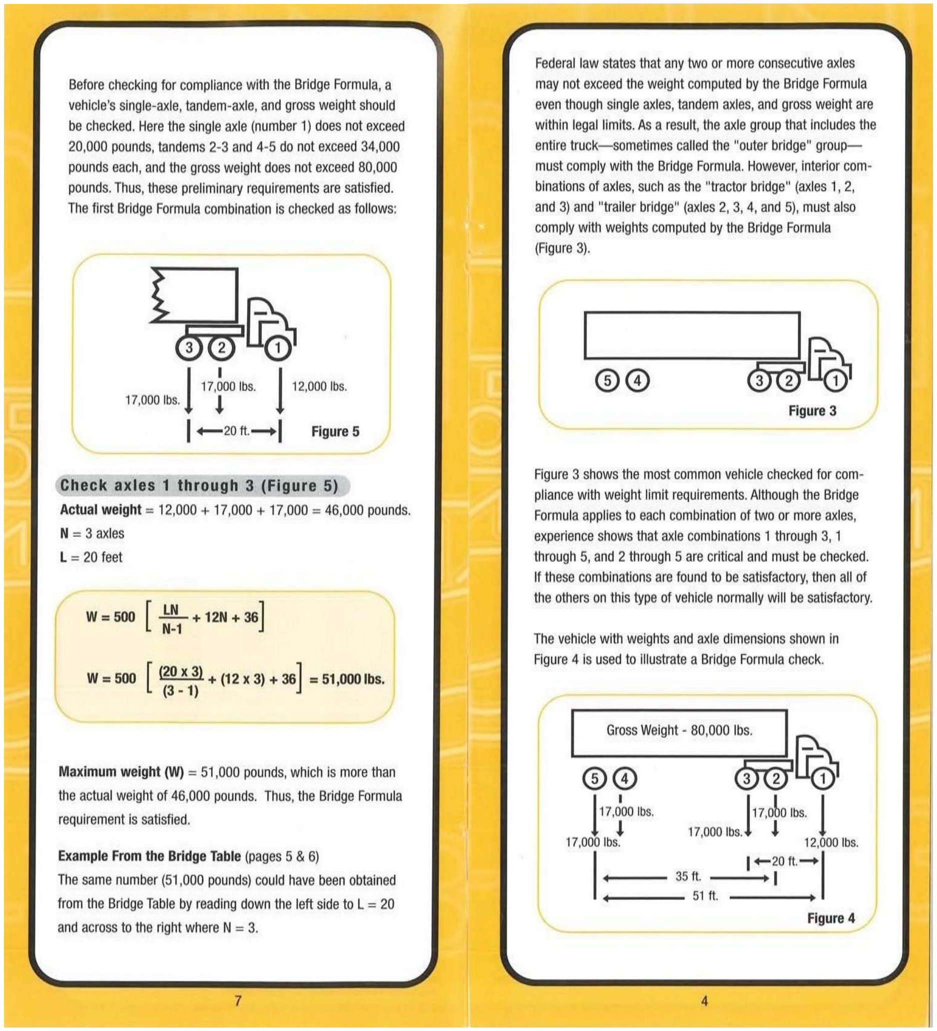
Now check axles 2 through 5 (Figure 7)

Actual weight = 17,000 + 17,000 + 17,000 + 17,000 = 68,000 pounds.

Maximum weight (W) = 65,500 pounds (Bridge Table for "L" of 35 feet and "N" of 4 axles).

This is a violation because the actual weight exceeds the weight allowed by the Bridge Formula. To correct the situation, some load must be removed from the vehicle or the axle spacing (35 feet) must be increased.

8



Before checking for compliance with the Bridge Formula, a vehicle's single-axle, tandem-axle, and gross weight should be checked. Here the single axle (number 1) does not exceed 20,000 pounds, tandems 2-3 and 4-5 do not exceed 34,000 pounds each, and the gross weight does not exceed 80,000 pounds. Thus, these preliminary requirements are satisfied. The first Bridge Formula combination is checked as follows:

Figure 5

Check axles 1 through 3 (Figure 5)

Actual weight = 12,000 + 17,000 + 17,000 = 46,000 pounds.

N = 3 axles

L = 20 feet

$$W = 500 \left[\frac{LN}{N-1} + 12N + 36 \right]$$

$$W = 500 \left[\frac{(20 \times 3)}{(3-1)} + (12 \times 3) + 36 \right] = 51{,}000 \text{ lbs.}$$

Maximum weight (W) = 51,000 pounds, which is more than the actual weight of 46,000 pounds. Thus, the Bridge Formula requirement is satisfied.

Example From the Bridge Table (pages 5 & 6)

The same number (51,000 pounds) could have been obtained from the Bridge Table by reading down the left side to L = 20 and across to the right where N = 3.

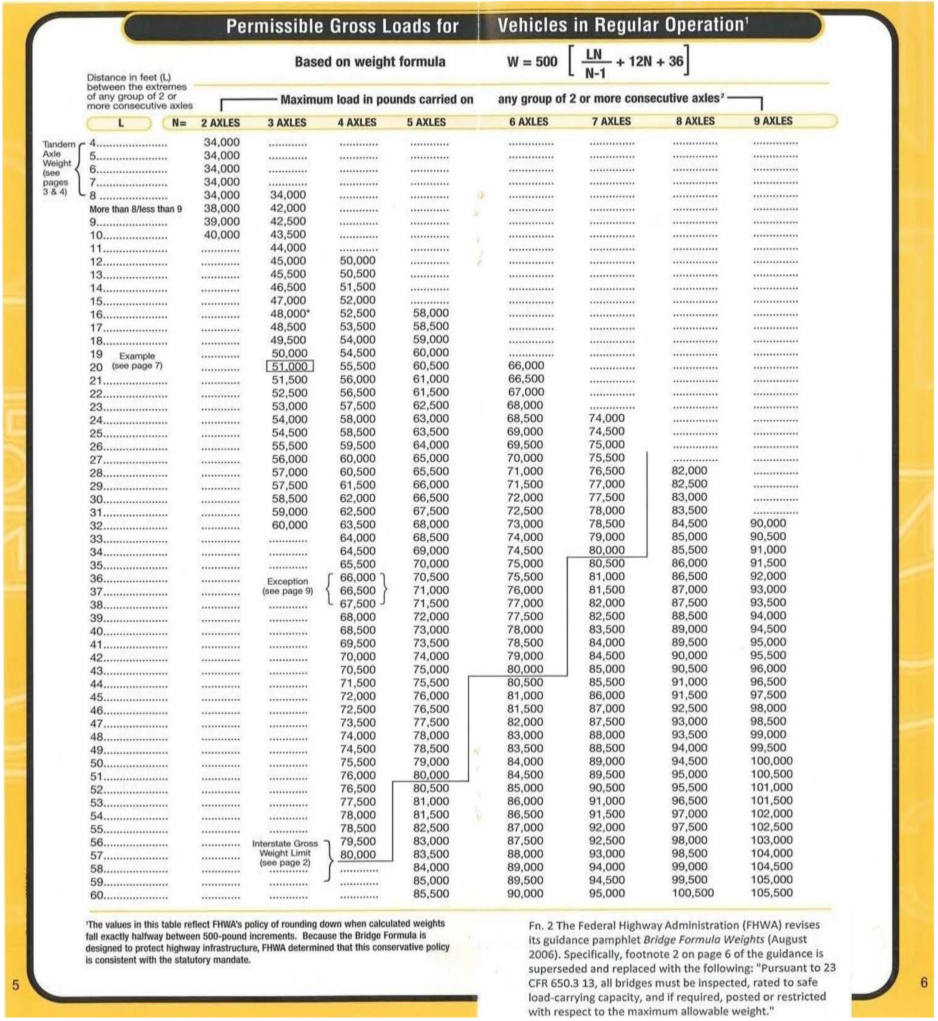
Federal law states that any two or more consecutive axles may not exceed the weight computed by the Bridge Formula even though single axles, tandem axles, and gross weight are within legal limits. As a result, the axle group that includes the entire truck—sometimes called the "outer bridge" group—must comply with the Bridge Formula. However, interior combinations of axles, such as the "tractor bridge" (axles 1, 2, and 3) and "trailer bridge" (axles 2, 3, 4, and 5), must also comply with weights computed by the Bridge Formula (Figure 3).

Figure 3

Figure 3 shows the most common vehicle checked for compliance with weight limit requirements. Although the Bridge Formula applies to each combination of two or more axles, experience shows that axle combinations 1 through 3, 1 through 5, and 2 through 5 are critical and must be checked. If these combinations are found to be satisfactory, then all of the others on this type of vehicle normally will be satisfactory.

The vehicle with weights and axle dimensions shown in Figure 4 is used to illustrate a Bridge Formula check.

Figure 4



Permissible Gross Loads for Vehicles in Regular Operation[1]

Based on weight formula $W = 500 \left[\frac{LN}{N-1} + 12N + 36 \right]$

Distance in feet (L) between the extremes of any group of 2 or more consecutive axles

Maximum load in pounds carried on any group of 2 or more consecutive axles[2]

L	N= 2 AXLES	3 AXLES	4 AXLES	5 AXLES	6 AXLES	7 AXLES	8 AXLES	9 AXLES
Tandem Axle Weight (see pages 3 & 4) 4	34,000	....	....	....	....	....	....	....
5	34,000	....	....	....	....	....	....	....
6	34,000	....	....	....	....	....	....	....
7	34,000	....	....	....	....	....	....	....
8	34,000	34,000	....	....	....	....	....	....
More than 8/less than 9	38,000	42,000	....	....	....	....	....	....
9	39,000	42,500	....	....	....	....	....	....
10	40,000	43,500	....	....	....	....	....	....
11	....	44,000	....	....	....	....	....	....
12	....	45,000	50,000	....	....	....	....	....
13	....	45,500	50,500	....	....	....	....	....
14	....	46,500	51,500	....	....	....	....	....
15	....	47,000	52,000	....	....	....	....	....
16	....	48,000*	52,500	58,000	....	....	....	....
17	....	48,500	53,500	58,500	....	....	....	....
18	....	49,500	54,000	59,000	....	....	....	....
19 Example (see page 7)	....	50,000	54,500	60,000	....	....	....	....
20	....	$\boxed{51,000}$	55,500	60,500	66,000	....	....	....
21	....	51,500	56,000	61,000	66,500	....	....	....
22	....	52,500	56,500	61,500	67,000	....	....	....
23	....	53,000	57,500	62,500	68,000	....	....	....
24	....	54,000	58,000	63,000	68,500	74,000	....	....
25	....	54,500	58,500	63,500	69,000	74,500	....	....
26	....	55,500	59,500	64,000	69,500	75,000	....	....
27	....	56,000	60,000	65,000	70,000	75,500	....	....
28	....	57,000	60,500	65,500	71,000	76,500	82,000	....
29	....	57,500	61,500	66,000	71,500	77,000	82,500	....
30	....	58,500	62,000	66,500	72,000	77,500	83,000	....
31	....	59,000	62,500	67,500	72,500	78,000	83,500	....
32	....	60,000	63,500	68,000	73,000	78,500	84,500	90,000
33	....	....	64,000	68,500	74,000	79,000	85,000	90,500
34	....	....	64,500	69,000	74,500	80,000	85,500	91,000
35	....	....	65,500	70,000	75,000	80,500	86,000	91,500
36	....	Exception (see page 9)	66,000	70,500	75,500	81,000	86,500	92,000
37	....		66,500	71,000	76,000	81,500	87,000	93,000
38	....	....	67,500	71,500	77,000	82,000	87,500	93,500
39	....	....	68,000	72,000	77,500	82,500	88,500	94,000
40	....	....	68,500	73,000	78,000	83,500	89,000	94,500
41	....	....	69,500	73,500	78,500	84,000	89,500	95,000
42	....	....	70,000	74,000	79,000	84,500	90,000	95,500
43	....	....	70,500	75,000	80,000	85,000	90,500	96,000
44	....	....	71,500	75,500	80,500	85,500	91,000	96,500
45	....	....	72,000	76,000	81,000	86,000	91,500	97,500
46	....	....	72,500	76,500	81,500	87,000	92,500	98,000
47	....	....	73,500	77,500	82,000	87,500	93,000	98,500
48	....	....	74,000	78,000	83,000	88,000	93,500	99,000
49	....	....	74,500	78,500	83,500	88,500	94,000	99,500
50	....	....	75,500	79,000	84,000	89,000	94,500	100,000
51	....	....	76,000	80,000	84,500	89,500	95,000	100,500
52	....	....	76,500	80,500	85,000	90,500	95,500	101,000
53	....	....	77,500	81,000	86,000	91,000	96,500	101,500
54	....	....	78,000	81,500	86,500	91,500	97,000	102,000
55	....	....	78,500	82,500	87,000	92,000	97,500	102,500
56	....	Interstate Gross Weight Limit (see page 2)	79,500	83,000	87,500	92,500	98,000	103,000
57	....		80,000	83,500	88,000	93,000	98,500	104,000
58	....	....	....	84,000	89,000	94,000	99,000	104,500
59	....	....	....	85,000	89,500	94,500	99,500	105,000
60	....	....	....	85,500	90,000	95,000	100,500	105,500

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[1] The values in this table reflect FHWA's policy of rounding down when calculated weights fall exactly halfway between 500-pound increments. Because the Bridge Formula is designed to protect highway infrastructure, FHWA determined that this conservative policy is consistent with the statutory mandate.

Fn. 2 The Federal Highway Administration (FHWA) revises its guidance pamphlet *Bridge Formula Weights* (August 2006). Specifically, footnote 2 on page 6 of the guidance is superseded and replaced with the following: "Pursuant to 23 CFR 650.3 13, all bridges must be inspected, rated to safe load-carrying capacity, and if required, posted or restricted with respect to the maximum allowable weight."

5

6

Commodity and Material Weights Approximate Weights of Commodities and Materials

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Acetone		———	50	6.6 / gallon
Alcohol,	Commercial	———	51	6.8 / gallon
	Proof spirits	———	57	7.6 / gallon
Alfalfa seed		bushel	——	60 / bushel
Aluminum,	Pure (cast)	———	165	4,450 / cu. yard
Apples,	Fresh	basket-bushel	——	48 / bushel
	Western, box	11.5” x 12” x 20”	——	50 / box
	New England, box	11.25” x 14.5” x 17.5”	——	56 / box
	Standard barrel	17” head, 28.5” stave	——	160 / barrel
	Dried	bushel	——	24 / bushel
Apricots,	Fresh	bushel	——	48 / bushel
	Western, box	5.5” x 12” x 20”	——	23 / box
Artichokes,	Box	10” x 11.5” x 22”	——	44 / box
Asbestos		———	153	4,130 / cu. yard
Asparagus,	crate, Loose	11.5” high x 9.75” top	——	38 / crate
	Bunches	11” bottom x 19.38” long	——	31 / crate
Avocados,	Box	5.75” x 11.25” x 17.5”	——	16 / box
Bananas,	Single stem	bunch	——	45-65 / bunch
Barley		bushel	——	48 / bushel
Barytes,	Mineral	———	280	7,560 / cu. yard
Basalt,	Rock	———	185	5,000 / cu. yard
Beans, dry,	Lima	bushel	——	56 / bushel
	White	bushel	——	60 / bushel
	Castor	bushel	——	46 / bushel
Beans, fresh,	Lima	bushel	——	39 / bushel
	String	bushel	——	36 / bushel
		hamper, 5 peck	——	45 / hamper

Figure 1

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Beef,	Slack barrel	21” x 30” stave (200 lbs. net)	——	254 / barrel
Beer,	Wood barrel	.5 barrel (16 gal.)	——	205 / barrel
	Wood barrel	.25 barrel (8 gal.)	——	105 / barrel
	Steel barrel	.5 barrel (16 gal.)	——	190 / barrel
	Steel barrel	.25 barrel (8 gal.)	——	95 / barrel
	Dutchman	.13 barrel (4 gal.)	——	51 / barrel
Case carton,*	Regular bottles	17.25” x 11.5” x 9.88”	——	45 / case
24, 12 oz.	Steinie bottles	18.38” x 12.13” x 7.38”	——	40 / case
	Tin cans	16.13” x 11” x 5.13”	——	28 / case
Wooden case,*	Regular bottles	21” x 13.5” x 10”	——	35 / case
24, 12 oz.	Steinie bottles	22” x 13.75” x 7.5”	——	46 / case
Beets		bushel	——	50-60 / bushel
	Small crate	9.75” x 13.75” x 24”	——	50 / crate
	Western crate	14” x 19” x 24.5”	——	95 / crate
Berries, crate,	24 pint	9.75” x 9.97” x 20”	——	25 / crate
	24 quart	11.75” x 11.75” x 24”	——	48 / crate
	32 quart	15.5” x 11.75” x 24”	——	63 / crate
Bluegrass seed		bushel	——	44 / bushel
Bluestone		———	120	3,240 / cu. yard
Bone		———	115	3,110 / cu. yard
Borax		———	110	2,970 / cu. yard
Bran		bushel	——	20 / bushel
Brick,	Soft	2.25” x 4” x 8.25”	——	4,320 / thousand
	Common	2.25” x 4” x 8.25”	——	5,400 / thousand
	Hard	2.25” x 4.25” x 8.5”	——	6,480 / thousand
	Pressed	2.38” x 4” x 8.38”	——	7,500 / thousand
	Paving	2.25” x 4” x 8.5”	——	6,750 / thousand
	Paving block	3.5” x 4” x 8.5”	——	8,750 / thousand
	Fire	2.5” x 4.5” x 9”	——	7,000 / thousand

* **Note:** Beer cases vary as to size and shape. Suggest checking with local source.

Figure 2

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Broccoli,	Bushel crate	12.75” x 12.75” x 17”	— —	30 / bushel
Brussels sprouts,	Crate	7.75” x 10.5” x 21.38”	— —	26 / crate
Buckwheat		bushel	— —	49 / bushel
Butter, tub,	Small	15” dia. x 5.75”	— —	25 / tub
Standard		15” dia. x 15”	— —	70 / tub
Butter, case,	30 – 1-lb. bricks	10.75” x 8.75” x 10.5”	— —	32 / case
	9-lb. pail	pail	— —	10 / pail
Cabbage		bushel	— —	38 / bushel
	Hamper	1.5 bushel	— —	58 / hamper
	Crate	12.75” x 18.5” x 19”	— —	60 / crate
	Western crate	14” x 19” x 24.5”	— —	85 / crate
	Barrel crate	12.75” x 18.75” x 37.38”	— —	110 / crate
Calf,	Live (average)	per head	— —	140-160 / head
Cantaloupe, crate,	Pony	11.75” x 11.75” x 23.5”	— —	58 / crate
	Standard	12.75” x 12.75” x 23.5”	— —	68 / crate
	Jumbo	13.75” x 13.75” x 23.5”	— —	78 / crate
	Pony flat	4.75” x 12.75” x 23.5”	— —	26 / crate
	Standard flat	5.25” x 14.25” x 23.5”	— —	28 / crate
	Jumbo flat	5.75” x 15.25” x 23.5”	— —	32 / crate
	Honeydew (Casaba)	6.38” x 15.13” x 23.5”	— —	35 / crate
Carbolic acid		— — —	60	8.0 / gallon
Carrots,	Topped	bushel	— —	55 / bushel
	With tops	bushel	— —	40 / bushel
	Crate	11.75” x 14.13” x 24”	— —	60 / crate
Castor oil		— — —	61	8.1 / gallon
Cauliflower		bushel	— —	30 / bushel
	Crate	9.38” x 19” x 24”	— —	50 / crate
Cedar*	(lumber)	— — —	30	2,500 / M. Bd. ft.
Celery,	Standard crate	11.63” x 22” x 22.63”	— —	70 / crate
	Half crate	10.75” x 13” x 20.38”	— —	35 / crate
	Northern crate	16.5” x 21.25” x 22”	— —	85 / crate

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 3

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Cement,	Block	8” x 8” x 16”	— —	42 / each
	Block	8” x 12” x 16”	— —	58 / each
	Portland	sack	— —	94 / sack
	Portland	barrel (4 sacks per)	— —	376 / barrel
Chalk		— — —	137	3,700 / cu. yard
Charcoal,	Oak	— — —	33	890 / cu. yard
	Pine	— — —	23	620 / cu. yard
Cheese,	Small box	15” dia. x 5.25”	— —	25 / box
	Medium box	15” dia. x 7.5”	— —	35 / box
	Large box	15” dia. x 15”	— —	70 / box
Cherries,	Unstemmed	bushel	— —	56 / bushel
	Stemmed	bushel	— —	64 / bushel
	Lug box	5.63” x 11.88” x 19.75”	— —	17 / box
Chestnut*	(lumber)	— — —	37	3,080 / M. Bd. ft.
Chestnuts		bushel	— —	50 / bushel
Chickens,	Live, broilers (20 avg.)	standard crate	— —	58 / crate
	Fowl (12 avg.)	standard crate	— —	78 / crate
	Standard crate,	empty 24” x 35” x 13”	— —	18 / crate
Cinder blocks		8” x 8” x 16”	— —	35 / each
		8” x 12” x 16”	— —	45 / each
Cinders		— — —	50	1,350 / cu. yard
Clay,	Dry lumps	— — —	85	2,300 / cu. yard
	Wet lumps	— — —	110	2,970 / cu. yard
	Wet packed	— — —	135	3,650 / cu. yard
	Fire	— — —	125	3,375 / cu. yard
Cork		— — —	15	405 / cu. yard
Corn,	Ear	bushel	— —	35 / bushel
	Shelled	bushel	— —	56 / bushel
	Sweet corn (green)	bushel	— —	43 / bushel
	Crate	12.88” x 12.88” x 24”	— —	60 / crate
Corn meal		bushel	— —	44 / bushel

Figure 4

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Corn oil		— — —	58	7.8 / gallon
Corn syrup		— — —	86	11.5 / gallon
Cotton,	Gin bale	30” x 48” x 54”	— —	515 / bale
	Standard bale	24” x 28” x 56”	— —	515 / bale
	Comp. bale	20” x 24” x 56”	— —	515 / bale
Cotton seed		bushel	— —	32 / bushel
Cottonseed oil		— — —	58	7.8 / gallon
Cottonwood*	(lumber)	— — —	37	3,080 / M. Bd. ft.
Cow,	Live-Feeder (average)	per head	— —	600 / head
	Butcher (average)	per head	— —	800 / head
	Butcher steer (average)	per head	— —	1100 / head
Cranberries,	1/4 barrel box	9.5” x 11” x 14”	— —	28 / box
	1/2 barrel box	12.25” x 14.75” x 22”	— —	60 / box
Cream		— — —	64	8.5 / gallon
Creosote		— — —	68	9.2 / gallon
Crude oil		— — —	56	7.5 / gallon
Cucumbers		bushel	— —	55 / bushel
	Crate	9.75” x 13.75” x 24”	— —	75 / crate
	Case	5” x 13.25” x 19”	— —	26 / case
Earth,	Loose, dry loam	— — —	76	2,050 / cu. yard
	Packed	— — —	95	2,565 / cu. yard
	Wet	— — —	125	3,375 / cu. yard
Eggplant,	Hamper	bushel	— —	40 / bushel
	Crate	14” x 11.75” x 24”	— —	54 / crate
Eggs,	30 dozen crate	12” x 12” x 26”	— —	55 / crate
Elm,*	Soft	— — —	38	3,170 / M. Bd. ft.
	Rock	— — —	45	3,750 / M. Bd. ft.
Fertilizer,	Commercial	burlap bag	— —	100-200 / bag
Fir,*	Douglas	— — —	32	2,670 / M. Bd. ft.
	Eastern	— — —	25	2,080 / M. Bd. ft.

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 5

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Fish, fresh,	Barrel	19” head, 29” stave	— —	300 / barrel
	1/2 Barrel	18.5” head, 23.5” stave	— —	160 / 1/2 barrel
Flour,	Barrel	19.13” head, 30” stave	— —	215 / barrel
Fuel oil,	Furnace grade	— — —	56	7.5 / gallon
	Diesel engine	— — —	52	7.0 / gallon
Furniture,	Household	— — —	7	1,915 / cu. yard
Garbage,	Dry, paper wrapped	— — —	15-30	405-810 / cu. yard
	Wet	— — —	50	1,240 / cu. yard
Gasoline		— — —	45	6.0 / gallon
Glass,	Common window	— — —	— —	162 / cu. foot
	Plate or crown	— — —	— —	161 / cu. foot
	1/4” plate	— — —	— —	3.3 / sq. foot
Glue		— — —	80	2,160 / cu. yard
Glycerine		— — —	79	10.5 / gallon
Grapefruit,	Western box	11.5” x 11.5” x 24”	— —	68 / box
	Southern box	12.75” x 12.75” x 27”	— —	90 / box
Grapes,	Basket	bushel	— —	48 / box
	Lug box	5.63” x 16.38” x 17.5”	— —	30 / box
	Western keg	15.5” dia. x 14”	— —	45 / keg
	Basket	12 quart	— —	18 / basket
Gravel,	Dry	— — —	95	2,565 / cu. yard
	Wet	— — —	125	3,375 / cu. yard
Greens		bushel	— —	25 / bushel
Groceries,	Misc. assorted	— — —	30	810 / cu. yard
Hay,	Bale	26” x 30” x 46”	— —	210 / bale
	Bale	17” x 22” x 43”	— —	115 / bale
	Bale	14” x 16” x 43”	— —	85 / bale
Hog,	Live (average)	per head	— —	225-250 / head
Honey		— — —	90	12.0 / gallon
Horse,	Live (average)	per head	— —	1,200-1,500 / head

Figure 6

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Horseradish roots		bushel	——	35 / bushel
Ice		———	57	1,540 / cu. yard
Ice (mfg.),	Block	11” x 22” x 32”	——	250 / block
	Block	14” x 14” x 40”	——	255 / block
	Block	11” x 22” x 56”	——	440 / block
Ice Cream,	2.5 gallon can, Full	9” dia. x 11”	——	18 / can
	Empty	———	——	6 / can
	5 gallon can, Full	9” dia. x 21”	——	35 / can
	Empty	———	——	11 / can
Kale		bushel	——	25 / bushel
Kerosene		———	50	6.6 / gallon
Lamb,	Live (average)	per head	——	75-85 / head
Lard,	Barrel	18” head, 30” stave	——	425 / barrel
Lath,	Standard length 29”	Packed in bundles of 50 Average bundle, dia. 9”	——	25 / bundle
Leather,	Dry	———	55	1,485 / cu. yard
	Wet	———	65	1,755 / cu. yard
Lemons,	Western box	10” x 13” x 25”	——	80 / box
	Southern box	12.75” x 12.75” x 27”	——	90 / box
Lentils		bushel	——	60 / bushel
Lettuce,	Hamper	bushel	——	25 / bushel
	Hamper	1.5 bushel	——	38 / hamper
	Basket	8.5” x 11.75” x 21.38”	——	17 / basket
	Crate	18.75” x 17.5” x 24.5”	——	75 / crate
	1/2 crate	9.5” x 13.5” x 24.5”	——	40 / 1/2 crate
Lime,	Hydrated	bushel	——	30 / bushel
	Barrel (small)	16.5” head, 27.5” stave	62	210 / barrel
	Barrel (large)		62	320 / barrel
Limes,	Western box	10” x 13” x 25”	——	80 / box
	Southern box	12.75” x 12.75” x 27”	——	90 / box

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 7

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Linseed oil		———	59	7.9 / gallon
Lubricating oil		———	52	7.0 / gallon
Malt,	Barley	bushel	——	28 / bushel
	Rye	bushel	——	32 / bushel
	Brewer’s grain	bushel	——	40 / bushel
Maple syrup		gallon	82	11.0 / gallon
Maple,*	Hard (lumber)	———	44	3,670 / M. Bd. ft.
	Soft	———	34	2,830 / M. Bd. ft.
Meal-corn		bushel	——	44 / bushel
Milk,	Bulk	———	64	8.6 / gallon
	5 gallon can	10.25” dia. x 19”	——	62 / can
	10 gallon can	13” dia. x 23”	——	115 / can
	Crate, 20.5 pt. bottles	8.5” x 12.75” x 16.75”	——	33 / crate
	20 pt. bottles	8.5” x 12.75” x 16.75”	——	54 / crate
Millet		bushel	——	50 / bushel
Molasses		———	90	12.0 / gallon
	Barrel	20.25” head, 34” stave	——	675 / barrel
Mortar,	Lime	———	110	2,970 / cu. yard
Mud,	Flowing	———	106	2,860 / cu. yard
	Packed	———	125	3,375 / cu. yard
Muriatic acid,	40%	———	40	10.0 / gallon
Naptha,	Petroleum	———	42	5.6 / gallon
Nitric acid,	91%	———	94	12.5 / gallon
Oak-red,*	Black	———	42	3,500 / M. Bd. ft.
	White	———	48	4,080 / M. Bd. ft.
Oats		bushel	——	32 / bushel
Okra,	Hamper	1/2 bushel	——	18 / hamper
	Hamper	bushel	——	34 / bushel
Oleomargarine,	(mfg.-tub)	21” head, 34” stave	——	70 / tub
	Cases	———	——	15-65 / case

Figure 8

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Olive oil		— — —	58	7.7 / gallon
Onions, dry,	Basket	bushel	— —	55 / bushel
	Bag	17” x 32”	— —	50 / bag
	Crate	20.5” x 11.5” x 10.5”	— —	58 / crate
	Green (with tops)	bushel	— —	32 / bushel
Oranges,	Western box	11.5” x 11.5” x 24”	— —	80 / box
	Southern box	12.75” x 12.75” x 27”	— —	90 / box
	Bushel box	10.75” x 10.75” x 23.5”	— —	65 / box
Oysters (shucked or meats)				
	Crate with 5.1 gal. cans	18” x 12” x 24”	(11.5 lbs. per gal.)	67 / crate
	With shells (bags)	bushel	— —	75 / bushel
Paint,	Lead and oil	— — —	127	17 / gallon
Paper,	Average solid	— — —	58	1,565 / cu. yard
	Newspaper rolls	34.25” x 35” dia.	— —	500 / roll
		51.5” x 35” dia.	— —	1,000 / roll
		64.25” x 35” dia.	— —	1,300 / roll
Paraffin		— — —	56	1,510 / cu. yard
Parsley,	Bushel crate	12.75” x 12.75” x 17”	— —	30 / crate
Parsnips		bushel	— —	50 / bushel
Peaches,	Basket	bushel	— —	48 / bushel
	1/2 bushel	— — —	— —	25 / basket
	Crate	10.5” x 11.25” x 24”	— —	50 / crate
	Western box	5.5” x 12.25” x 19.75”	— —	22 / box
Peanuts,	Unshelled	bushel	— —	22 / bushel
	Bag	— — —	— —	100 / bag
Peanut oil		— — —	57	7.6 / gallon
Pears,	Basket	bushel	— —	50 / bushel
	Western box	9.63” x 12.13” x 19.75”	— —	51 / box
Peas,	Dry	bushel	— —	60 / bushel
	Fresh hamper	bushel	— —	35 / hamper
	Hamper	40 quarts	— —	45 / hamper

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 9

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Pecans,	Large bag	— — —	— —	100 / bag
	Small bag	— — —	— —	50 / bag
Peppers,	Basket	bushel	— —	25 / basket
	Crate	14.13” x 11.75” x 24”	— —	45 / crate
Petroleum		— — —	56	7.5 / gallon
Phosphate rock		— — —	200	5,400 / cu. yard
Pine,*	Long leaf	— — —	44	3,670 / M. Bd. ft.
	North Carolina	— — —	36	3,000 / M. Bd. ft.
	Oregon	— — —	32	2,670 / M. Bd. ft.
	Red	— — —	30	2,500 / M. Bd. ft.
	White	— — —	26	2,170 / M. Bd. ft.
	Yellow, long leaf	— — —	44	3,670 / M. Bd. ft.
	Short leaf	— — —	38	3,170 / M. Bd. ft.
Pineapples,	Crate	11” x 12.5” x 36”	— —	85 / crate
Pitch		— — —	70	1,900 / cu. yard
Plums,	Basket	bushel	— —	56 / bushel
	Western box	5.63” x 16.38” x 17.5”	— —	25 / box
Pomegranates,	Box	6.5” x 12” x 24.63”	— —	30 / box
Popcorn,	Ear	bushel	— —	70 / bushel
	Shelled	bushel	— —	56 / bushel
Poplar*		— — —	27	2,250 / M. Bd. ft.
Porcelain		— — —	150	4,050 / cu. yard
Pork (dressed),	Barrel (200 lbs. net)	18” head, 29” stave	— —	240 / barrel
Potatoes,	Sweet	bushel	— —	55 / bushel
	White or Irish	bushel	— —	60 / bushel
	Bag	1.67 bushel	— —	102 / bag
	Barrel	17.13” head, 28.5” stave	— —	185 / barrel
Prunes,	Box	5.63” x 16.38” x 19.75”	— —	25 / box
	Box	5.63” x 11.88” x 19.75”	— —	22 / box
Quinces		bushel	— —	50 / bushel

Figure 10

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Radishes,	Basket	bushel	— —	34 / bushel
	Crate	9.75” x 13.75” x 24”	— —	40 / crate
Redwood*		— — —	30	2,500 / M. Bd. ft.
Resin		— — —	68	1,835 / cu. yard
Rhubarb (pie plant)		bushel	— —	50 / bushel
	Box	5.25” x 11.5” x 22”	— —	24 / box
Rice,		Unhulled bushel	— —	43 / bushel
Rock,	Crushed (average)	— — —	100	2,700 / cu. yard
Romaine,	Crate	13.88” x 18.88” x 24.5”	— —	64 / crate
	Crate	12.25” x 13” x 15.25”	— —	27 / crate
Rubber goods		— — —	94	2,540 / cu. yard
Rutabagas		bushel	— —	56 / bushel
Rye		bushel	— —	56 / bushel
Salt, rock,	Solid	— — —	136	3,670 / cu. yard
	Coarse	— — —	45	1,215 / cu. yard
	Fine	— — —	50	1,350 / cu. yard
	Barrel (average)	— — —	— —	280 / barrel
Sand, fine,	Dry	— — —	110	2,970 / cu. yard
	Wet	— — —	125	3,375 / cu. yard
Sand, coarse,	Dry	— — —	95	2,565 / cu. yard
	Wet	— — —	120	3,240 / cu. yard
Sand,	Mixed	— — —	115	3,100 / cu. yard
Sandstone,	Solid	— — —	147	3,970 / cu. yard
	Crushed	— — —	86	2,325 / cu. yard
Shale,	Solid	— — —	172	4,645 / cu. yard
	Crushed	— — —	92	2,485 / cu. yard
Sheep,	Live (average)	per head	— —	125-150 / head
Shingles,	Bundle	Pkg. in bndls. of 200-250 Size (avg.) 24” x 20” x 10”	— —	50 / bundle
Snow,	Moist-packed	— — —	50	1,350 / cu. yard

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 11

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Soft drinks,	Half depth bottle box			
	24-6 to 8 oz. bottles	12.25” x 18.75” x 8.5”	— —	39 / box
	Full depth bottle box			
	12-24 to 32 oz. bottles	13.38” x 18.5” x 12.25”	— —	60 / box
Sorghum syrup		— — —	86	11.5 / gallon
Soybeans		bushel	— —	60 / bushel
Soybean oil		— — —	58	7.7 / gallon
Spinach,	Hamper	bushel	— —	20 / bushel
	Basket	bushel	— —	27 / bushel
Spruce*		— — —	28	2,330 / M. Bd. ft.
Squash		bushel	— —	46 / bushel
Starch		— — —	96	2,590 / cu. yard
Stone,	Crushed, (average)	— — —	100	2,700 / cu. yard
	Rip-rap	— — —	65	1,755 / cu. yard
Straw,	Bale	17” x 22” x 42”	— —	110 / bale
	Bale	26” x 30” x 46”	— —	180 / bale
Street sweepings		— — —	32	865 / cu. yard
Sugar		— — —	100	2,700 / cu. yard
Sugar,	Bag	(100 lbs. net)	— —	101 / bag
	Barrel (22 lbs. empty)	19.13” head, 30” stave	— —	345 / barrel
	Case	24 – 5-lb. cartons	— —	135 / case
	Case	60 – 2-lb. cartons	— —	135 / case
Sugar cane syrup		— — —	85	11.3 / gallon
Sulphur		— — —	125	3,375 / cu. yard
Sulfuric acid, 87%		— — —	112	15 / gallon
Sweet corn,	Basket	bushel	— —	45 / bushel
	Crate	13” x 13” x 24”	— —	60 / crate
Sycamore*		— — —	37	3,080 / M. Bd. ft.
Tallow		— — —	60	1,620 / cu. yard

Figure 12

Product		Size of Container	Lbs. Per Cu. Ft.	No. of Lbs. / Per
Tanks, Acetylene,	102 cu. foot	empty	— —	70 / tank
		filled	— —	75 / tank
	310 cu. foot	empty	— —	200 / tank
		filled	— —	220 / tank
Tanks, Oxygen,	150 cu. foot	empty	— —	80 / tank
		filled	— —	92 / tank
	300 cu. foot	empty	— —	133 / tank
		filled	— —	153 / tank
Tar		— — —	65	1755 / cu. yard
Tile,	Solid	— — —	115	3,100 / cu. yard
	Partition (construction)	— — —	40	1,080 / cu. yard
Tomatoes,	Basket	bushel	— —	55 / bushel
	Lug box	7.25” x 14” x 17.5”	— —	35 / box
	Crate	10.5” x 11.25” x 24”	— —	48 / crate
	Basket	8.5” x 8.75” x 20”	— —	18 / basket
	Basket (paper)	4.25” x 8.5” x 16.25”	— —	9 / basket
	Basket (wood)	5.5” x 7.25” x 16.5”	— —	10 / basket
Turpentine		— — —	54	7.2 / gallon
Turnips,	Basket	bushel	— —	54 / bushel
Vetch seed		bushel	— —	60 / bushel
Vinegar		— — —	64	8.5 / gallon
Walnuts,	Bulk	bushel	— —	50 / bushel
	Bag	2 bushel	— —	100 / bag
Water,	Fresh	— — —	63	8.4 / gallon
Wheat,	Bulk	bushel	— —	60 / bushel
	Bag	1.5 bushel	— —	90 / bag
Wool,	Pressed	— — —	82	2,215 / cu. yard

*Kiln dried lumber averages 10% to 15% lighter, and green lumber 40% to 50% heavier, than air dried.

Figure 13

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	3500 HG GAS	4500 HG GAS
GVWR / GCWR	12,000 lbs. / 18,000 lbs.	14,500 lbs./ 20,500 lbs.
WB	109 in., 132.5 in, 150 in., 176 in.	
Engine	GMPT L8T (Gen V), 8-cylinder, V Block 4-cycle, OHV, Direct Fuel Injection, Oil Jet Piston Cooling	
Model/Displacement	GMPT-V8/400 CID (6.6 liters)	
Horsepower	350 HP @ 4500 RPM	
Torque	425 lb.-ft. @ 3800 RPM	
Equipment	Direct injection technology, mass air flow meter, powertrain interface module (PIM), onboard diagnostics, oxygen sensors, catalytic convertor, map sensor, with external oil cooler, engine cruise control, and rear engine cover.	
Transmission	8L90 Hydra-Matic 8-speed automatic w/lock-up converter and overdrive. PTO not available.	
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.	
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.	
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.	
Front GAWR	4,860 lbs.	6,630 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.	
Rear GAWR	8,840 lbs.	11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.	
Wheels	16 x 6.0 6-hole disc wheels, painted white.	19.5 x 6.0 6-hole disc wheels, painted white.
Tires	215/85R-16E (10 ply) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.	225/70R-19.5F/G (12/14 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. 4 channel anti-lock brake system.	
Fuel Tank	38.6 gal. rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank) and fuel tank zone module (mounted on rearward crossmember). Through the rail fuel fill.	
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 44,000 psi section modulus 7.20 cubic in, RBM 316,800 lb-in per rail.	
Cab	All steel, low cab forward, BBC 70.9 in, 45˚ mechanical tilt with torsion assist.	
Cab Equipment	TRICOT breathable cloth covered high back driver’s seat with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass. AM/FM Radio with Aux input/USB port and Bluetooth. Air conditioning, a rear body dome lamp switch, and a cab latch switch with an indicator and buzzer are standard. Bi-LED Head Lamps and Signature Light.	
Electrical	12 volt, negative ground, 750 CCA maintenance free battery located on frame, 170 Amp alternator with integral regulator.	
Options	see page 10 for options	

NOTE: These selected specifications are subject to change without notice

Chassis Specifications

Model	3500 HG GAS CREW	4500 HG GAS CREW
GVWR / GCWR	12,000 lbs. / 18,000 lbs.	14,500 lbs./ 20,500 lbs.
WB	150 in., 176 in.	
Engine	GMPT L8T (Gen V), 8-cylinder, V Block 4-cycle, OHV, Direct Fuel Injection, Oil Jet Piston Cooling	
Model/Displacement	GMPT-V8/400 CID (6.6 liters)	
Horsepower	350 HP @ 4500 RPM	
Torque	425 lb.-ft. @ 3800 RPM	
Equipment	Direct injection technology, mass air flow meter, powertrain interface module (PIM), onboard diagnostics, oxygen sensors, catalytic convertor, map sensor, with external oil cooler, engine cruise control, and rear engine cover.	
Transmission	8L90 Hydra-Matic 8-speed automatic w/lock-up converter and overdrive. PTO not available.	
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.	
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.	
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.	
Front GAWR	4,860 lbs.	6,630 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.	
Rear GAWR	8,840 lbs.	11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.	
Wheels	16 x 6.0 6-hole disc wheels, painted white.	19.5 x 6.0 6-hole disc wheels, painted white.
Tires	215/85R-16E (10 ply) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.	225/70R-19.5F/G (12/14 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. 4 channel anti-lock brake system.	
Fuel Tank	38.6 gal. rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank) and fuel tank zone module (mounted on rearward crossmember). Through the rail fuel fill.	
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 44,000 psi section modulus 7.20 cubic in, RBM 316,800 lb-in per rail.	
Cab	All-steel, low cab forward, BBC 109.9 in., 7-passenger seating.	
Cab Equipment	TRICOT breathable cloth covered high back driver’s seat with two occupant passenger seat and four passenger rear bench seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, and tinted glass. AM/FM Radio with Aux input/USB port and Bluetooth. Air conditioning, a rear body dome lamp switch, and a cab latch switch with an indicator and buzzer are standard. Bi-LED Head Lamps and Signature Light.	
Electrical	12 volt, negative ground, 750 CCA maintenance free battery located on frame, 170 Amp alternator with integral regulator.	
Options	see page 10 for options	

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	5500 HG GAS	5500 XG GAS
GVWR / GCWR	17,950 lbs. / 23,950 lbs.	19,500 lbs./ 25,500 lbs.
WB	132.5 in, 150 in., 176 in., 200 in.	132.5 in, 150 in., 176 in., 200 in., 212 in.
Engine	GMPT L8T (Gen V), 8-cylinder, V Block 4-cycle, OHV, Direct Fuel Injection, Oil Jet Piston Cooling	
Model/Displacement	GMPT-V8/400 CID (6.6 liters)	
HP (Gross)	350 HP @ 4500 RPM	
Torque (Gross)	425 lb.-ft. @ 3800 RPM	
Equipment	Direct injection technology, mass air flow meter, powertrain interface module (PIM), onboard diagnostics, oxygen sensors, catalytic convertor, map sensor, with external oil cooler, engine cruise control, and rear engine cover.	
Transmission	Allison 1000 RDS 6-speed automatic transmission.PTO not available.	
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.	
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.	Reverse Elliot “I”-Beam rated at 7,275 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.	
Front GAWR	6,830 lbs.	7,275 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.	
Rear GAWR	13,660 lbs.	14,460 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.	
Wheels	19.5 x 6.0 6-hole disc wheels, painted white.	
Tires	225/70R-19.5G (14 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.	
Brakes	Dual circuit power assisted hydraulic 4-channel anti-lock service brake system with EBD (Electronic Brake Distribution) for load proportioning of the front and rear disc brakes. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted.	
Fuel Tank	38.6 gal. rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank) and fuel tank zone module (mounted on rearward crossmember). Through the rail fuel fill.	
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 44,000 psi section modulus 7.20 cubic in, RBM 316,800 lb-in per rail.	
Cab	All steel, low cab forward, BBC 70.9 in, 45˚ mechanical tilt with torsion assist.	
Cab Equipment	TRICOT breathable cloth covered high back driver’s seat with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass. AM/FM Radio with Aux input/USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch and indicator with buzzer. Bi-LED Head Lamps and Signature Light.	
Electrical	12 volt, negative ground, 750 CCA maintenance free battery located on frame, 170 Amp alternator with integral regulator.	
Options	see page 3 for options	

NOTE: These selected specifications are subject to change without notice

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	5500 HG GAS CREW	5500 XG GAS CREW
GVWR / GCWR	17,950 lbs. / 23,950 lbs.	19,500 lbs./ 25,500 lbs.
WB	150 in., 176 in., 200 in.	150 in., 176 in., 200 in., 212 in.
Engine	GMPT L8T (Gen V), 8-cylinder, V Block 4-cycle, OHV, Direct Fuel Injection, Oil Jet Piston Cooling	
Model/Displacement	GMPT-V8/400 CID (6.6 liters)	
HP (Gross)	350 HP @ 4500 RPM	
Torque (Gross)	425 lb.-ft. @ 3800 RPM	
Equipment	Direct injection technology, mass air flow meter, powertrain interface module (PIM), onboard diagnostics, oxygen sensors, catalytic convertor, map sensor, with external oil cooler, engine cruise control, and rear engine cover.	
Transmission	Allison 1000 RDS 6-speed automatic transmission.PTO not available.	
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.	
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.	
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.	
Front GAWR	6,830 lbs.	7,275 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.	
Rear GAWR	13,660 lbs.	14,460 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.	
Wheels	19.5 x 6.0 6-hole disc wheels, painted white.	
Tires	225/70R-19.5G (14 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.	
Brakes	Dual circuit power assisted hydraulic 4-channel anti-lock service brake system with EBD (Electronic Brake Distribution) for load proportioning of the front and rear disc brakes. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted.	
Fuel Tank	38.6 gal. rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank) and fuel tank zone module (mounted on rearward crossmember). Through the rail fuel fill.	
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 44,000 psi section modulus 7.20 cubic in, RBM 316,800 lb-in per rail.	
Cab	All steel, low cab forward, BBC 109.9 in., 7-passenger seating.	
Cab Equipment	TRICOT breathable cloth covered high back driver’s seat with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, front and rear floor mats, tinted glass. AM/FM/CD Radio with Aux input/USB port and Bluetooth. Rear body dome lamp switch. Bi-LED Head Lamps and Signature Light.	
Electrical	12 volt, negative ground, 750 CCA maintenance free battery located on frame, 170 Amp alternator with integral regulator.	
Options	see page 3 for options	

NOTE: These selected specifications are subject to change without notice

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings - 3500 / 4500 HG

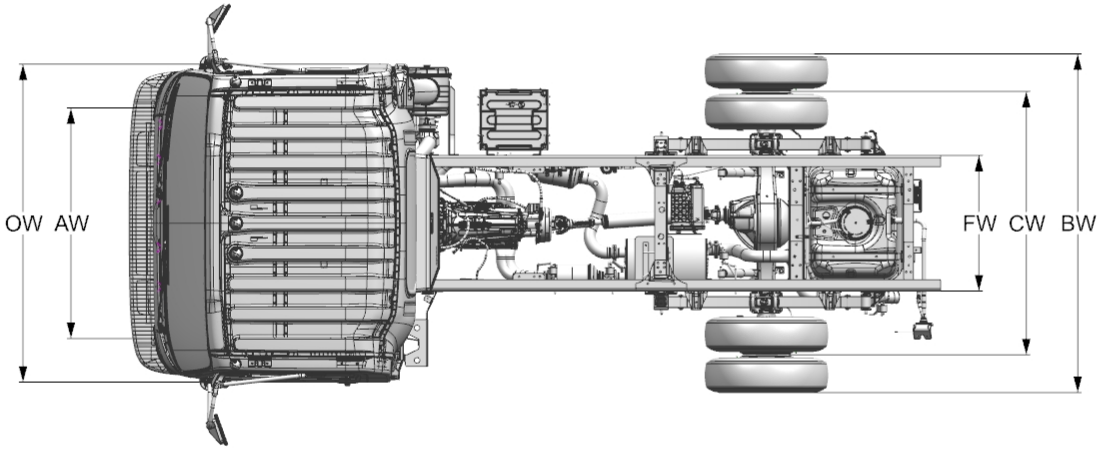


Figure 1

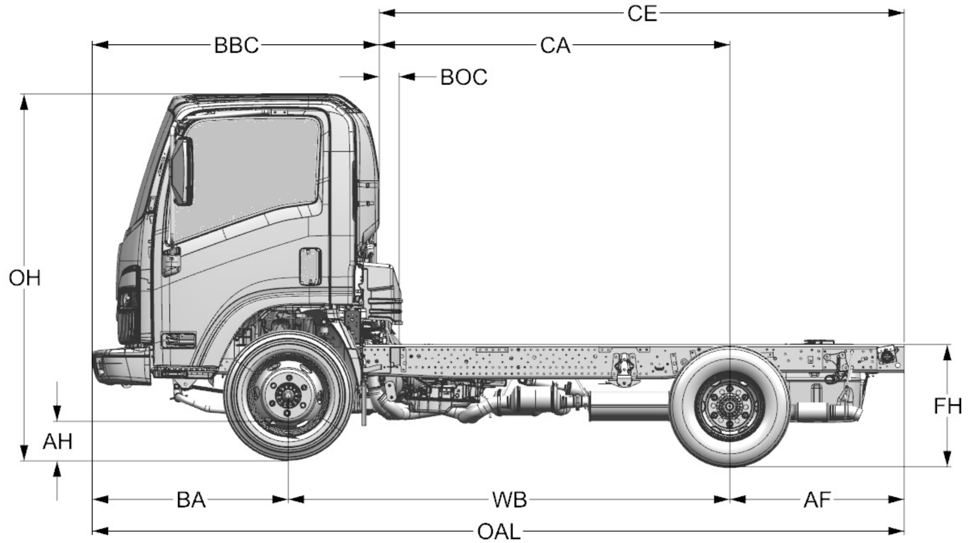


Figure 2

CHASSIS DIMENSIONS (in.)				
WB	CA[1]	CE[2]	AF	OAL
109	86.5	129.6	43.1	200.5
132.5	110.0	153.1	43.1	224.0
150	127.5	170.6	43.1	241.5
176	153.5	196.6	43.1	267.5
DIMENSION CONSTANTS (in.)				
AW = Front axle track				65.6
BA = Front bumper to centerline of axle				48.4
BBC = Bumper to back of cab				70.9
BOC = Back of cab clearance				7.7
BW = Overall width across rear axle				83.3
CW = Rear axle track				65
FW = Frame width				33.5
OW = Overall width across cab (without mirrors)				81.3
VARIABLE DIMENSIONS BY GVWR (in.)			12,000 lb.	14,500 lb.
AH = Ground to bottom of axle			7.5	8.3
FH = Frame height (unladen) at E.O.F.[3]			31.8	33
OH = Overall height (without clearance lights)			90	90.9

Notes:

[1] Effective CA is CA less BOC.

[2] Effective CE is CE less BOC.

[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings - 3500 / 4500 HG CREW

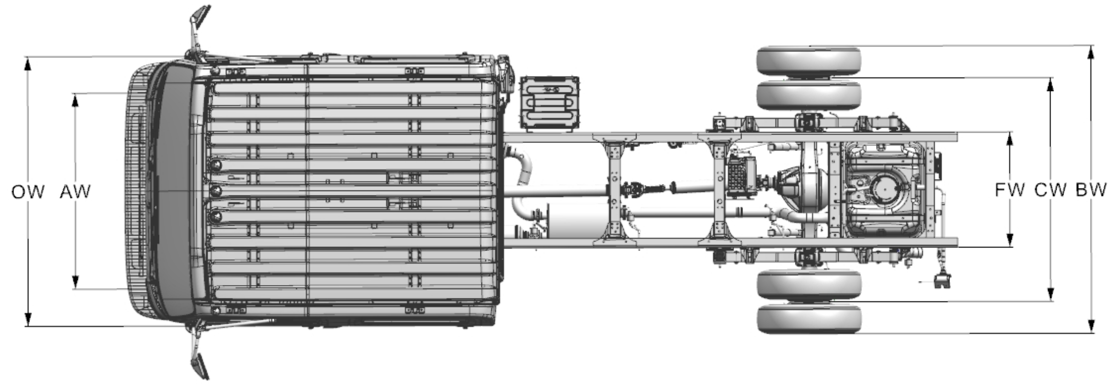


Figure 3

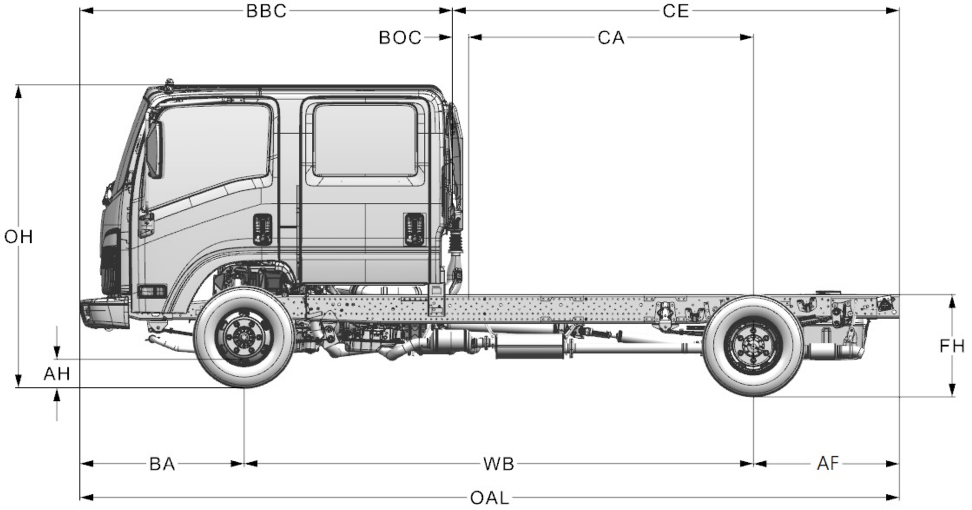


Figure 4

CHASSIS DIMENSIONS (in.)				
WB	CA[1]	CE[2]	AF	OAL
150	88.5	131.6	43.1	241.5
176	114.5	157.6	43.1	267.5
DIMENSION CONSTANTS (in.)				
AW = Front axle track				65.6
BA = Front bumper to centerline of axle				48.4
BBC = Bumper to back of cab				109.9
BOC = Back of cab clearance				5
BW = Overall width across rear axle				83.3
CW = Rear axle track				65
FW = Frame width				33.5
OW = Overall width across cab (without mirrors)				81.3
VARIABLE DIMENSIONS BY GVWR (in.)			12,000 lb.	14,500 lb.
AH = Ground to bottom of axle			7.5	8.3
FH = Frame height (unladen) at E.O.F.[3]			31.8	33
OH = Overall height (without clearance lights)			90	91.1

Notes:

[1] Effective CA is CA less BOC.

[2] Effective CE is CE less BOC.

[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings - 5500 HG / 5500 XG

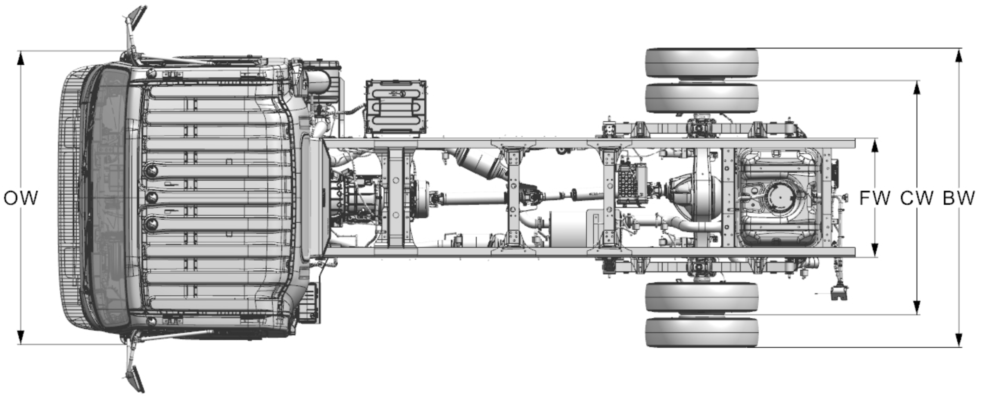


Figure 5

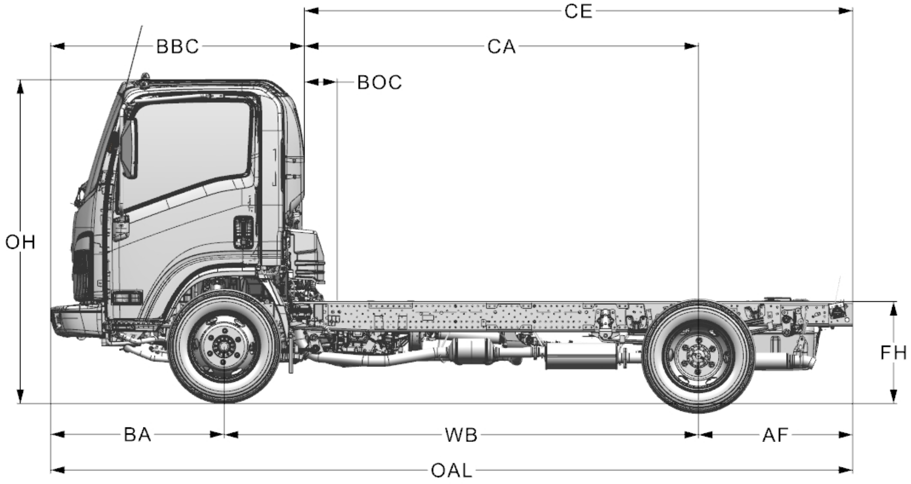


Figure 6

CHASSIS DIMENSIONS (in.)				
WB	CA[1]	CE[2]	AF	OAL
132.5	110.0	153.1	43.1	224.0
150	127.5	170.6	43.1	241.5
176	153.5	196.6	43.1	267.5
200	177.5	220.6	43.1	291.5
212[4]	189.5	232.6	43.1	303.5

DIMENSION CONSTANTS (in.)	
AW = Front axle track	65.6
BA = Front bumper to centerline of axle	48.3
BBC = Bumper to back of cab	70.9
BOC = Back of cab clearance	7.7
BW = Overall width across rear axle	83.3
CW = Rear axle track	65
FW = Frame width	33.5
OW = Overall width across cab (without mirrors)	81.3

VARIABLE DIMENSIONS BY GVWR (in.)	17,950 lb.	19,500 lb.
AH = Ground to bottom of axle	7.5	7.5
FH = Frame height (unladen) at E.O.F.[3]	33	33
OH = Overall height (without clearance lights)	92.4	92.4

Notes:

[1] Effective CA is CA less BOC.
[2] Effective CE is CE less BOC.
[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.
[4] Only available on the 5500 XG

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings - 5500 HG / 5500 XG CREW

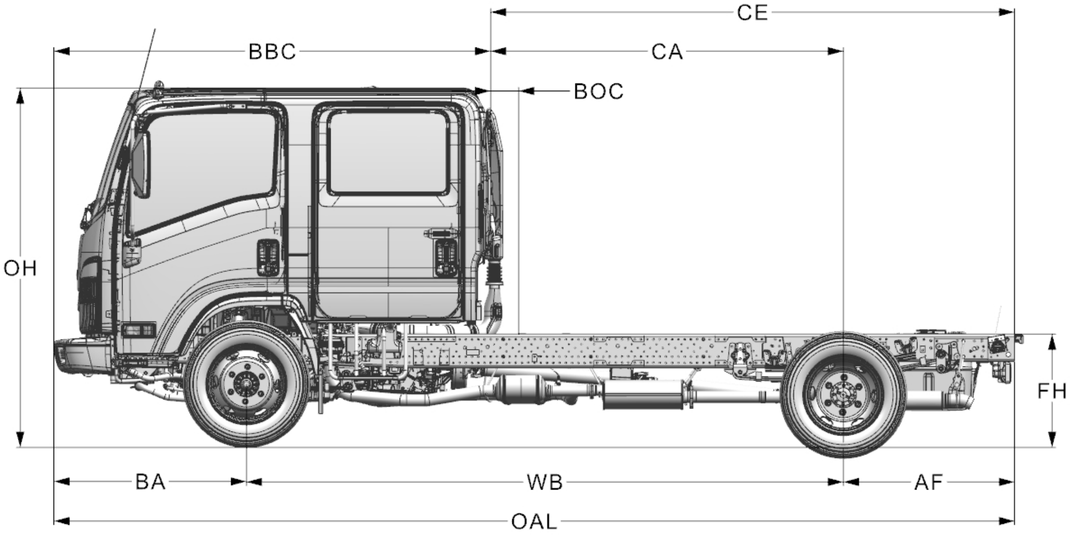


Figure 7

CHASSIS DIMENSIONS (in.)				
WB	CA[1]	CE[2]	AF	OAL
150	88.5	131.6	43.1	241.5
176	114.5	157.6	43.1	267.5
200	138.5	181.6	43.1	291.5
212[4]	150.5	193.6	43.1	303.5
DIMENSION CONSTANTS (in.)				
AW = Front axle track				65.6
BA = Front bumper to centerline of axle				48.3
BBC = Bumper to back of cab				109.9
BOC = Back of cab clearance				5
BW = Overall width across rear axle				83.3
CW = Rear axle track				65
FW = Frame width				33.5
OW = Overall width across cab (without mirrors)				81.3
VARIABLE DIMENSIONS BY GVWR (in.)			17,950 lb.	19,500 lb.
AH = Ground to bottom of axle			7.5	7.5
FH = Frame height (unladen) at E.O.F.[3]			33	33
OH = Overall height (without clearance lights)			92.4	92.4

Notes:

[1] Effective CA is CA less BOC.

[2] Effective CE is CE less BOC.

[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.

[4] Only available on the 5500 XG

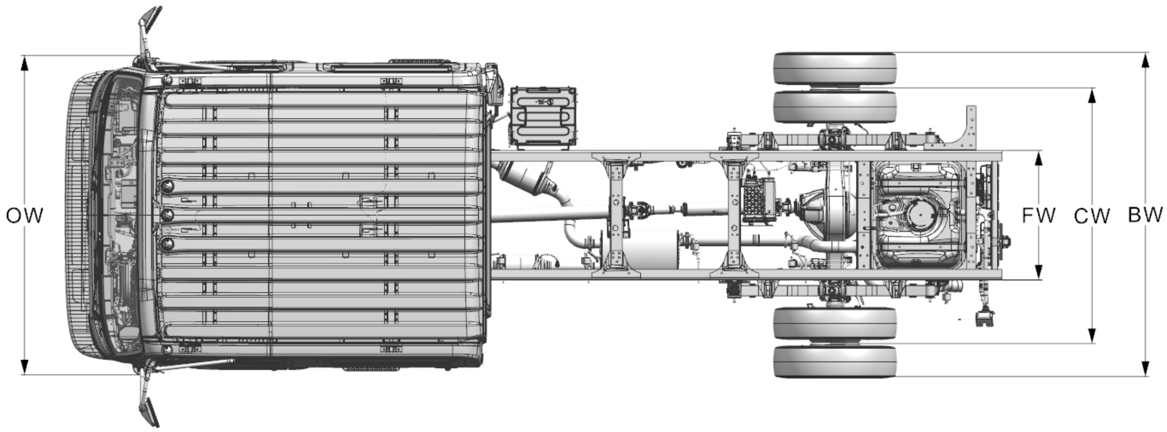


Figure 8

Vehicle Weights, Dimensions and Ratings

Chassis Curb Weights and Payloads

3500 HG GAS STANDARD CAB - 12,000 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1C1	109	lbs.	3309	1845	5154	6846
1C2	132.5	lbs.	3360	1896	5256	6744
1C3	150	lbs.	3380	1905	5285	6715
1C4	176	lbs.	3408	1925	5333	6667

4500 HG GAS STANDARD CAB - 14,500 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1F1	109	lbs.	3439	2075	5514	8986
1F2	132.5	lbs.	3488	2105	5593	8907
1F3	150	lbs.	3519	2114	5633	8867
1F4	176	lbs.	3549	2125	5674	8826

Figure 9

CHASSIS CURB WEIGHTS AND PAYLOADS

5500 HG GAS STANDARD CAB - 17,950 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1R2	132.5	lbs.	3663	2223	5886	12064
1R3	150	lbs.	3713	2216	5929	12021
1R4	176	lbs.	3753	2230	5983	11967
1R5	200	lbs.	3878	2407	6285	11665

5500 XG GAS STANDARD CAB - 19,500 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1U2	132.5	lbs.	3666	2223	5889	13611
1U3	150	lbs.	3716	2216	5932	13568
1U4	176	lbs.	3756	2230	5986	13514
1U5	200	lbs.	3881	2407	6288	13212
1U6	212	lbs.	3901	2433	6334	13166

Figure 10

Chassis Curb Weights and Payloads

3500 HG GAS CREW CAB - 12,000 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1D3	150	lbs.	3759	2075	5834	6166
1D4	176	lbs.	3810	2075	5885	6115

4500 HG GAS CREW CAB - 14,500 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1G3	150	lbs.	3898	2284	6182	8318
1G4	176	lbs.	3948	2275	6223	8277

Figure 11

CHASSIS CURB WEIGHTS AND PAYLOADS

5500 HG GAS CREW CAB - 17,950 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1S3	150	lbs.	4073	2406	6479	11471
1S4	176	lbs.	4143	2400	6543	11407
1S5	200	lbs.	4268	2577	6845	11105

5500 XG GAS CREW CAB - 19,500 lb. GVWR:

Model	WB	Unit	Front	Rear	Total	Payload
1V3	150	lbs.	4076	2406	6482	13018
1V4	176	lbs.	4146	2400	6546	12954
1V5	200	lbs.	4271	2577	6848	12652
1V6	212	lbs.	4291	2603	6894	12606

Figure 12

Notes:

Chassis curb weight reflects standard equipment and fuel, but no driver or payload. Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weight Limits and Option Weights

VEHICLE WEIGHT RATINGS				
Description	3500 HG Capacity (lb.)	4500 HD Capacity (lb.)	5500 HG Capacity (lb.)	5500 XD Capacity (lb.)
GVWR Designed Maximum	12,000	14,500	17,950	19,500
GCWR Combined Maximum	18,000	20,500	23,950	25,500
GAWR - Front	4,860	6,630	6,830	7,275
GAWR - Rear	8,840	11,020	13,660	14,460

Option Weights

RPO[1]	Option Description	Front / Rear (lb)
IF4	Air deflector roof mounted (not available in crew cab)	64 / 0
I1V	Audio system with 7" diagonal color touch screen	5 / 1
I2V	Audio system with 7" diagonal color touch screen with backup camera (camera shipped loose)	5 / 2
UZF	Back up alarm	0 / 2
I8T	Chrome grille	1 / 0
I2M	Delete Cruise Control Switch	0 / 0
IY4	Delete standard radio	-3 / 0
BW2	Dual Batteries (750 CCA x 2)	39 / 18
BA8	Dual AGM Batteries (825 CCA x 2)	51 / 24
I4W	Engine block heater with receptacle (115V 400W)	3 / 0
IF6	Fire extinguisher and triangle kit	19 / 0
I4V	Forward Collision and Lane Departure Warning (Mobileye)	2 / 0
I4Z	Front panel film	1 / 0
I0W	Heated dual remote control mirrors (17” head)	4 / 0
IS0	Heated mirrors	1 / 0
I8L	High visibility seat belt (orange color, driver and RH passenger seat only)	0 / 0
I7L	High visibility seat belt (orange color, driver seat only)	0 / 0
I4K	Keyless entry system	3 / 0
I6L	LED lighting package (converts all exterior and interior chassis lighting to LED bulbs)	0 / 0
IU2	Mirror bracket for 102" wide body	1 / 0
IV9	Seat covers crew cab	12 / 0
IV8	Seat covers for standard cab seats	6 / 0
I1M	Seat covers standard cab with suspension seat	6 / 0
I3Z	Spare keys (2 additional, 4 keys in total)	0 / 0
I0Z	Spartan Modification Center ship thru code	0 / 0
I3G	Speed limited to 65 mph (max cruise speed 60 mph)	0 / 0
I6T	Suspension driver's seat (standard cab only)	18 / 0
SEO[1]	Option Description	Front / Rear (lb)
04	Standard model specifications with power windows, power door locks, and air conditioning	Standard chassis weight includes these features
14	In rail fuel tank with power windows, power door locks, air conditioning and Limited Slip Differential	0 / 15

NOTES:

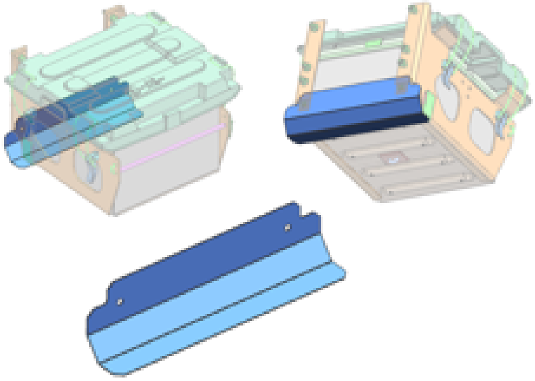
[1] RPO is Regular Production Option that is stocked in Port inventory.
LSO is Limited Stock Option that is stocked in Port inventory but should be checked for availability and delivery time.
SEO is Special Equipment Option and requires 90-120 day lead time for delivery.

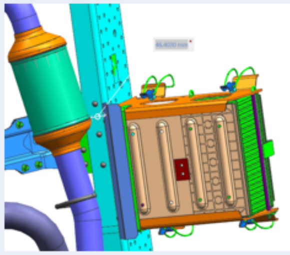
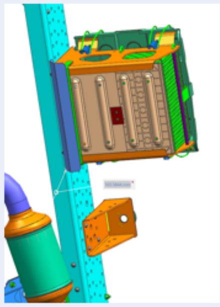
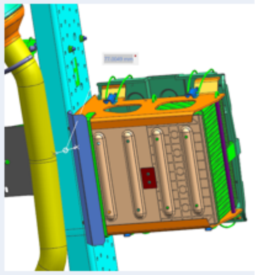
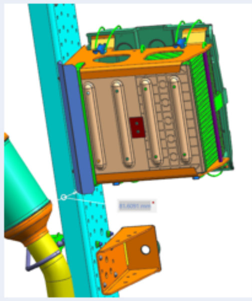
Dual Battery Heat Shield

Starting with the 26MY LCF vehicles, we will be offering the PIO option for dual batteries. A new heat shield will be provided when the PIO option is ordered.

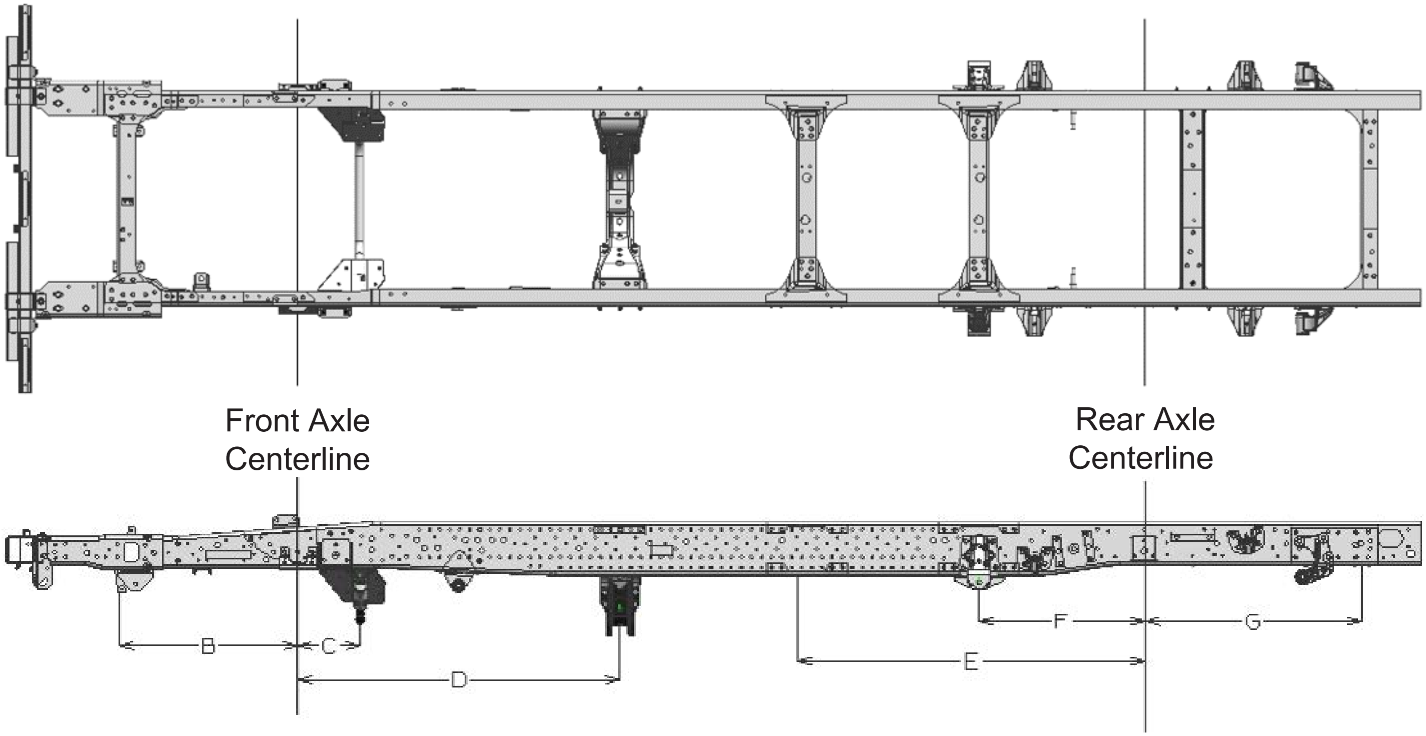
- Option Code: TP7 - Dual Batteries (750 CCA x 2)
- Option Code: K4N - Dual AGM Batteries (825 CCA x 2)

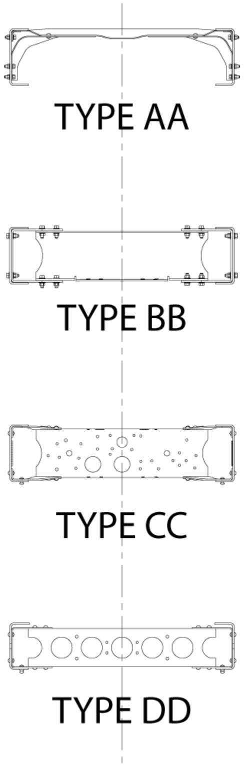
If the PIO option is not ordered and a second battery is added after the fact, the proper heat shielding will also need to be added in the location shown below.



CL3/4		CL5	
①Single CAB	②Crew CAB	③Single CAB	④Crew CAB
			

Frame and Crossmember Specifications - STD CAB


Front Axle Centerline
Rear Axle Centerline
B
C
D
E
F
G


TYPE AA
TYPE BB
TYPE CC
TYPE DD

	WHEELBASE	FRAME THICKNESS	CROSSMEMBER TYPE/LOCATION					
			B	C	D	E	F	G
3500 HG / 4500 HG	109	0.24	28	9.75	AA 50.4	-	CC 26.0	DD 33.8
	132.5	0.24	28	9.75	AA 50.4	BB 54.4	CC 26.0	DD 33.8
	150	0.24	28	9.75	AA 50.4	BB 57.9	CC 26.0	DD 33.8
	176	0.24	28	9.75	AA 50.4	BB 74.5	CC 26.0	DD 33.8

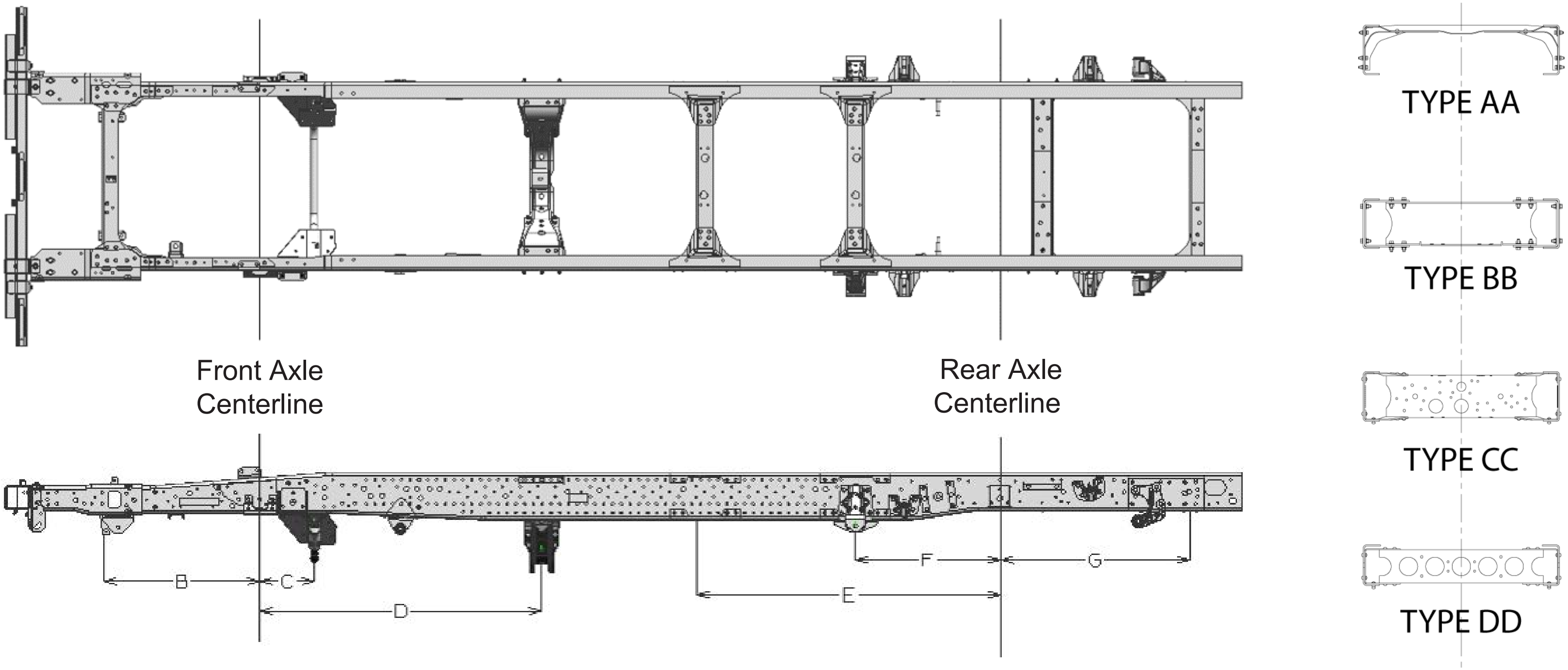
	WHEELBASE	FRAME THICKNESS	CROSSMEMBER TYPE/LOCATION					
			B	C	D	E	F	G
5500 HG / 5500 XD	132.5	0.24	27.55	9.9	AA 36.67	BB 57.68	CC 25.98	DD 33.62
	150	0.24	27.55	9.9	AA 36.67	BB 58.07	CC 25.98	DD 33.62
	176	0.24	27.55	9.9	AA 36.67	BB 74.61	CC 25.98	DD 33.62
	200	0.24	27.55	9.9	AA 45.56	BB 98.85	CC 25.98	DD 33.62
	212	0.24	27.55	9.9	AA 45.56	BB 110.85	CC 25.98	DD 33.62

Figure 13

Dimensions in inches

2026 Chevrolet Low Cab Forward

Frame and Crossmember Specifications - CREW CAB


Front Axle Centerline
Rear Axle Centerline
B
C
D
E
F
G
TYPE AA
TYPE BB
TYPE CC
TYPE DD

3500 HG / 4500 HG

WHEELBASE	FRAME THICKNESS	CROSSMEMBER TYPE/LOCATION					
		B	C	D	E	F	G
150	0.24	28	9.75	AA 50.4	BB 57.9	CC 26.0	DD 33.8
176	0.24	28	9.75	AA 50.4	BB 74.5	CC 26.0	DD 33.8

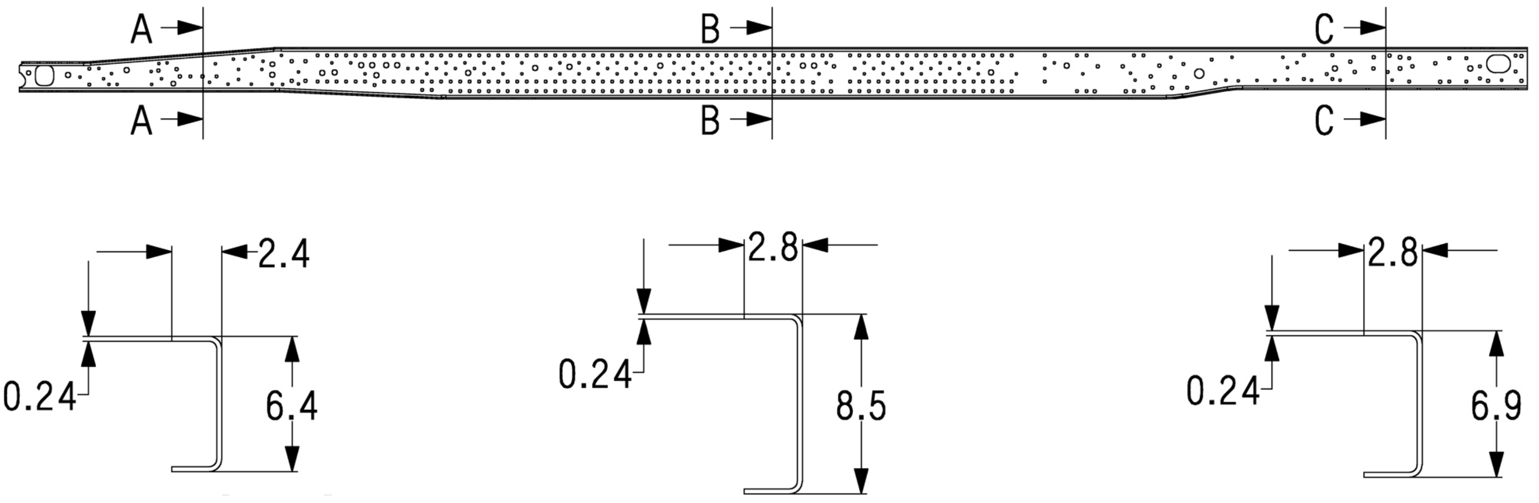
5500 HG / 5500 XD

WHEELBASE	FRAME THICKNESS	CROSSMEMBER TYPE/LOCATION					
		B	C	D	E	F	G
150	0.24	27.55	9.9	AA 36.67	BB 58.07	CC 25.98	DD 33.62
176	0.24	27.55	9.9	AA 36.67	BB 74.61	CC 25.98	DD 33.62
200	0.24	27.55	9.9	AA 45.56	BB 98.85	CC 25.98	DD 33.62
212	0.24	27.55	9.9	AA 45.56	BB 110.85	CC 25.98	DD 33.62

Figure 14

Dimensions in inches

Frame Chart


A
A
B
B
C
C
2.4
0.24
6.4
2.8
0.24
8.5
2.8
0.24
6.9
SECTION A-A
SECTION B-B
SECTION C-C

WHEELBASE	FRAME FL	FRAME THICKNESS
109	182.5	0.24
132.5	206.1	0.24
150	223.8	0.24
176	249.8	0.24
200	273.8	0.24
212	285.8	0.24

Figure 15

Dimensions in inches

3500 HG / 4500 HG Standard Cab Dimension - Auxiliary Views

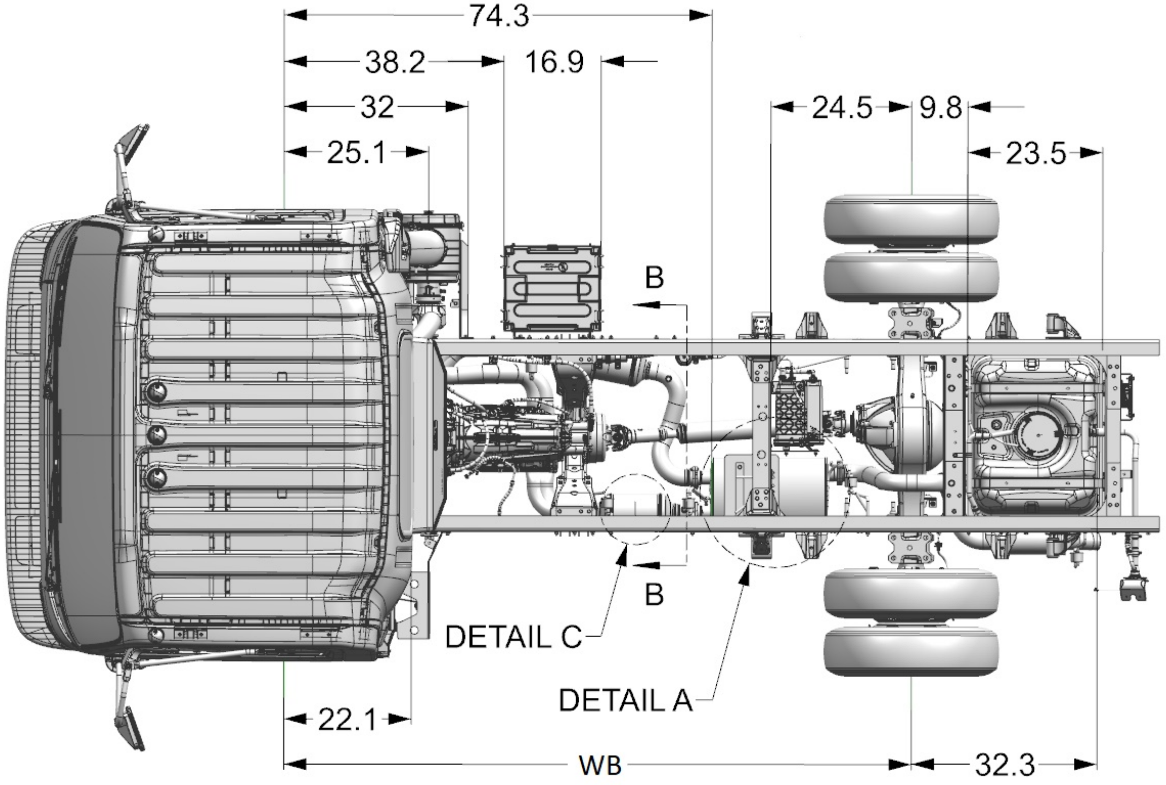

74.3
38.2
16.9
32
25.1
24.5
9.8
23.5
B
B
DETAIL C
DETAIL A
22.1
WB
32.3

Figure 16

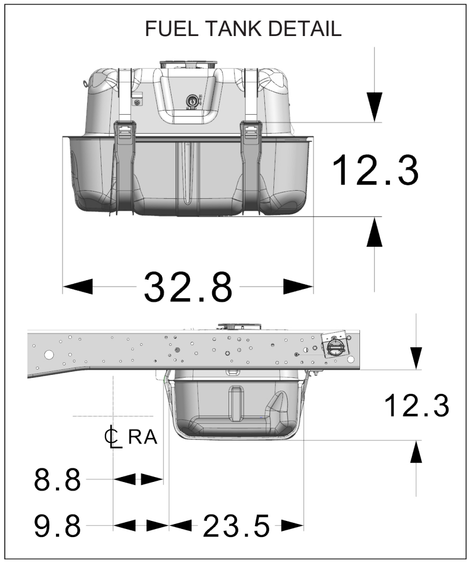

FUEL TANK DETAIL
12.3
32.8
12.3
℄ RA
8.8
9.8
23.5

Figure 17

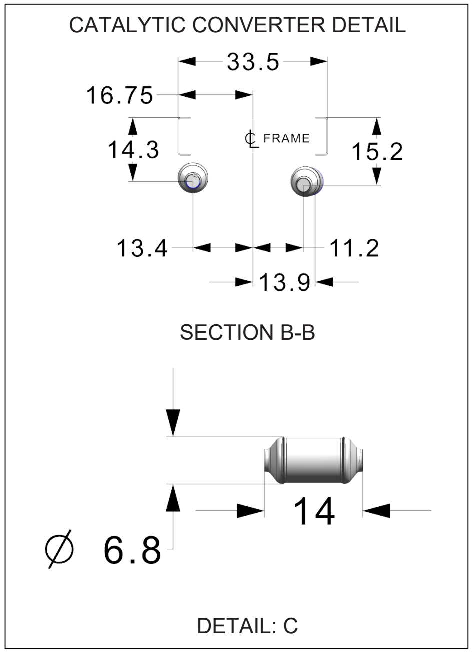

CATALYTIC CONVERTER DETAIL
33.5
16.75
℄ FRAME
14.3
15.2
13.4
11.2
13.9
SECTION B-B
14
∅ 6.8
DETAIL: C

Figure 19

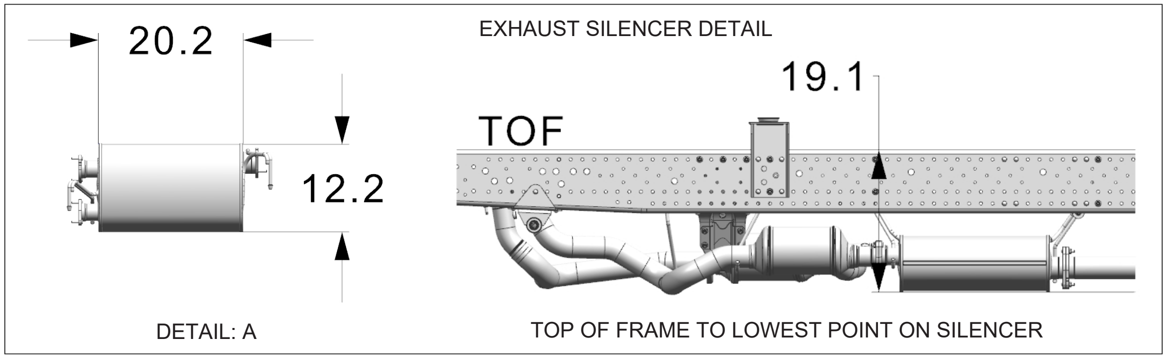

20.2
12.2
DETAIL: A
EXHAUST SILENCER DETAIL
19.1
TOF
TOP OF FRAME TO LOWEST POINT ON SILENCER

Figure 18

Dimensions in inches

2026 Chevrolet Low Cab Forward

5500 HG / 5500 XG *Standard Cab Dimension - Auxiliary Views*

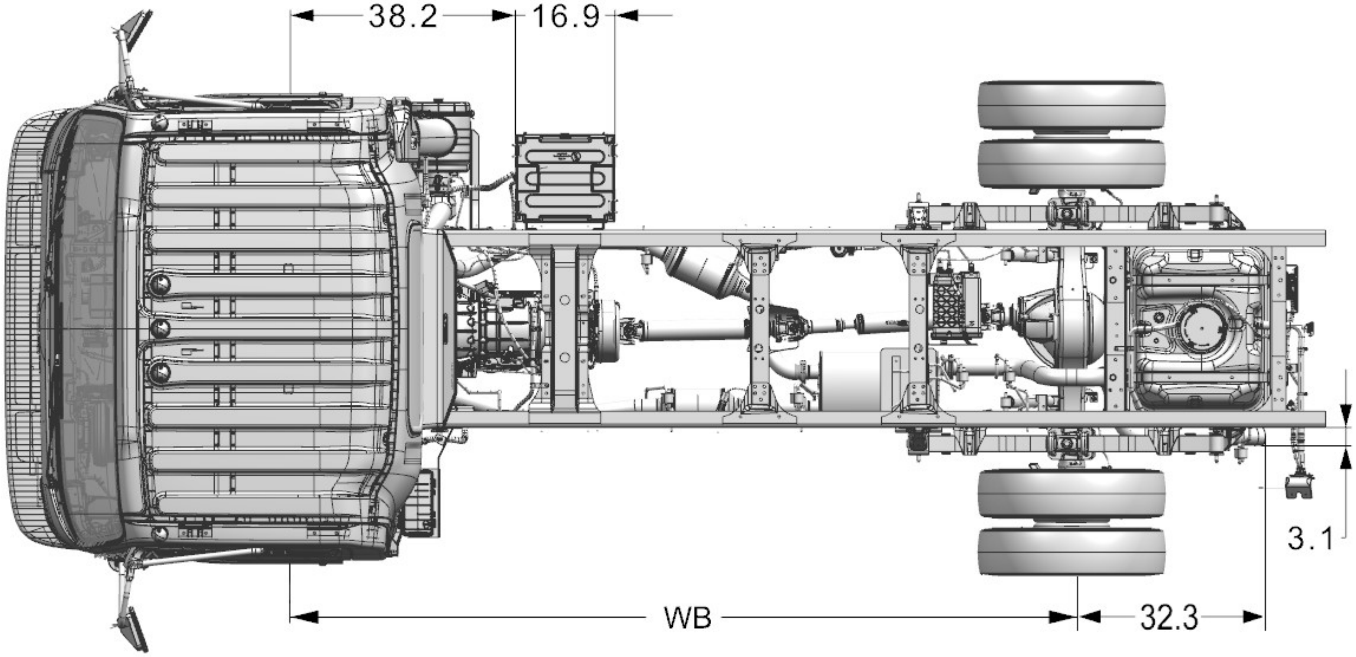

38.2
16.9
3.1
WB
32.3

Figure 20

FUEL TANK DETAIL

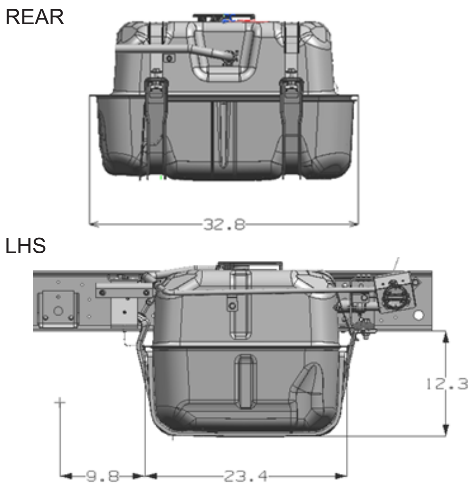

REAR
32.8
LHS
12.3
9.8
23.4

Figure 21

EXHAUST SILENCER DETAIL

SILENCER DIMENSIONS

TOP OF FRAME TO LOWEST POINT ON SILENCER

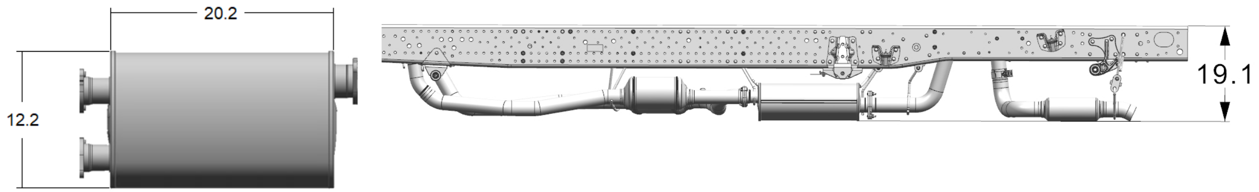


Figure 22

CATALYTIC CONVERTER DETAIL

CONVERTER LOCATIONS

CONVERTER DETAIL DIMENSIONS

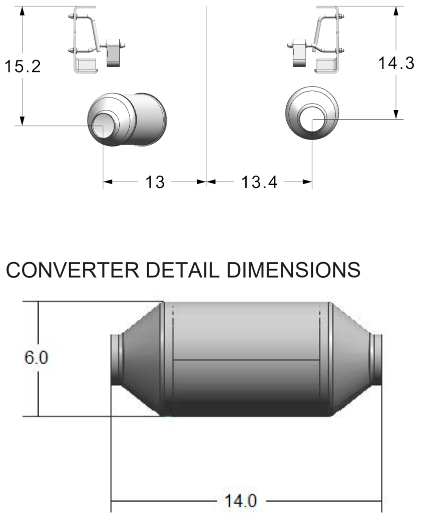

15.2
14.3
13
13.4
6.0
14.0

Figure 23

Dimensions in inches

3500 HG / 4500 HG Crew Cab Dimension - Auxiliary Views

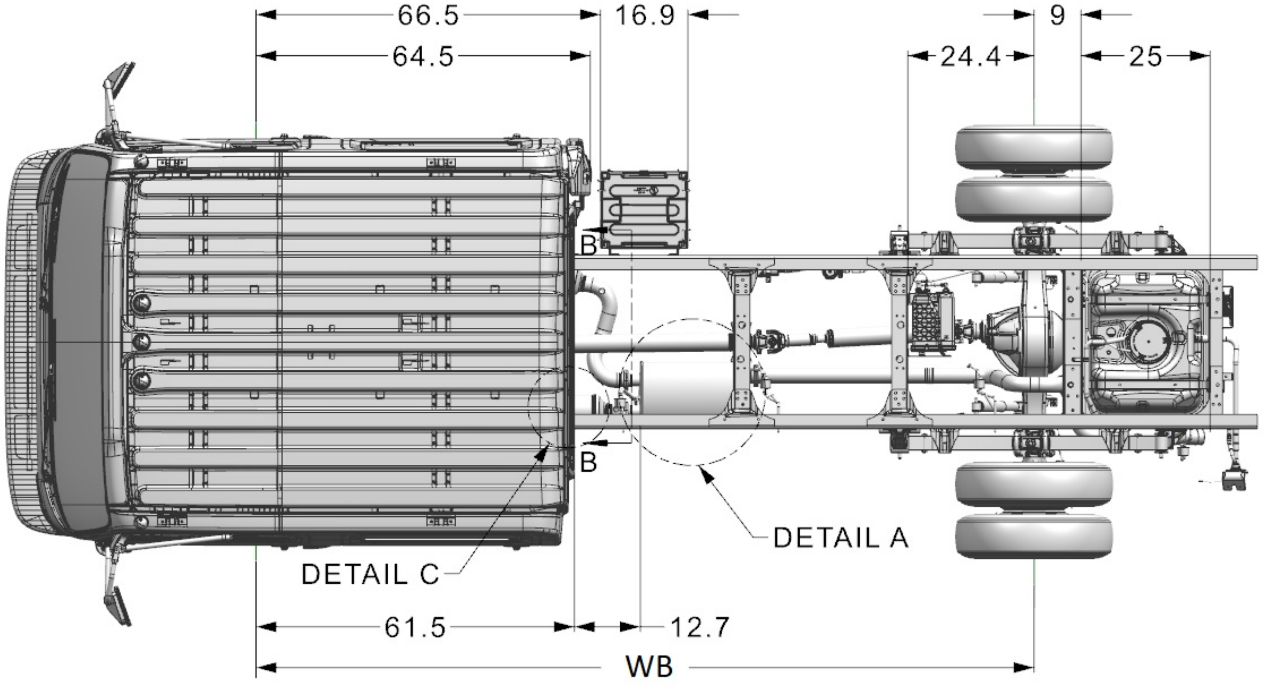

66.5
16.9
64.5
9
24.4
25
B
B
DETAIL A
DETAIL C
61.5
12.7
WB

Figure 24

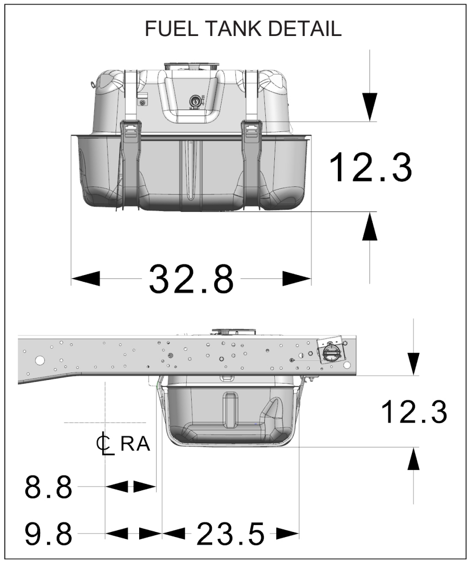

FUEL TANK DETAIL
12.3
32.8
12.3
℄ RA
8.8
9.8
23.5

Figure 25

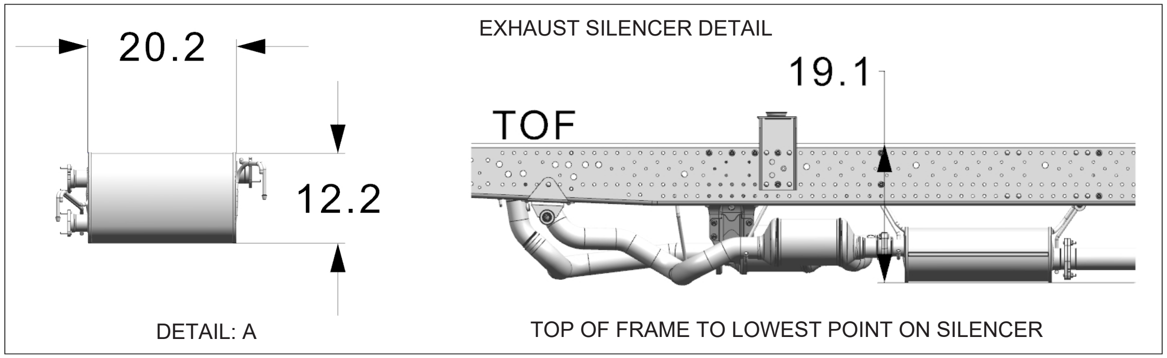

20.2
12.2
DETAIL: A
EXHAUST SILENCER DETAIL
19.1
TOF
TOP OF FRAME TO LOWEST POINT ON SILENCER

Figure 26

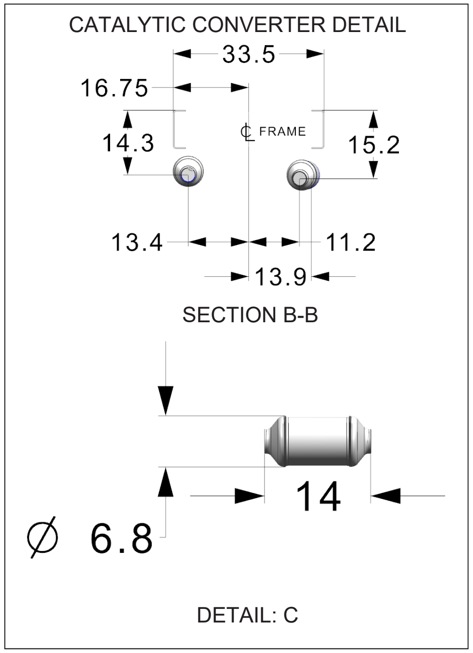

CATALYTIC CONVERTER DETAIL
33.5
16.75
14.3
℄ FRAME
15.2
13.4
11.2
13.9
SECTION B-B
14
∅ 6.8
DETAIL: C

Figure 27

Dimensions in inches

5500 HG / 5500 XG *Crew Cab Dimension - Auxiliary Views*

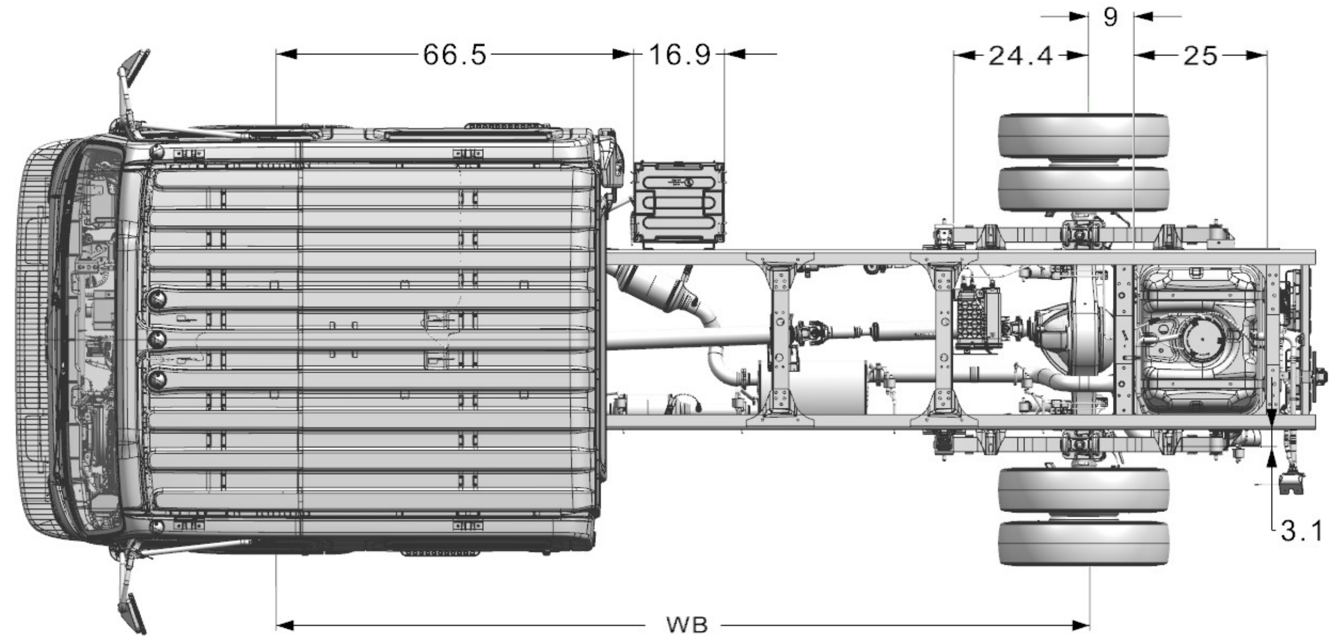

66.5
16.9
9
24.4
25
3.1
WB

Figure 28

FUEL TANK DETAIL

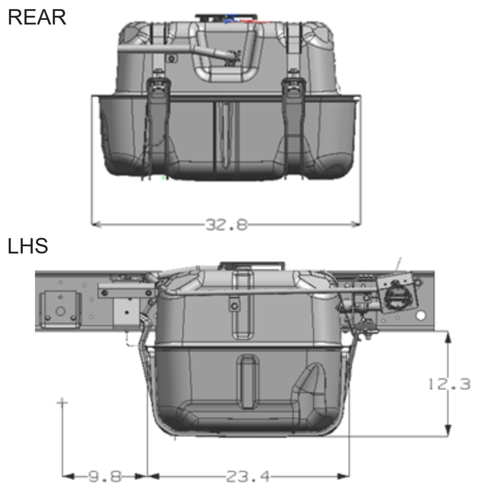
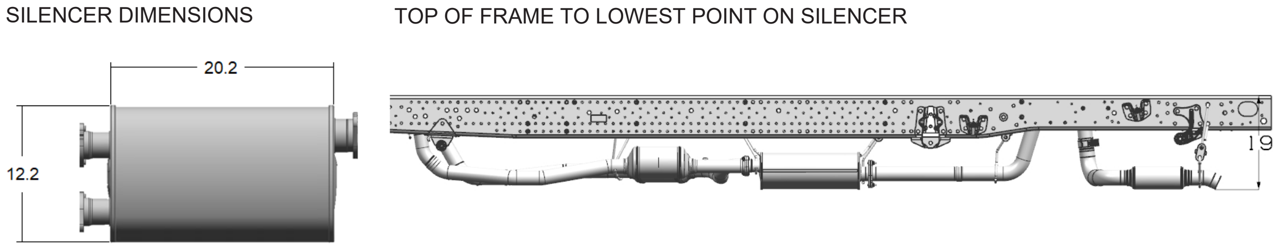

REAR
32.8
LHS
12.3
9.8
23.4

Figure 29

EXHAUST SILENCER DETAIL

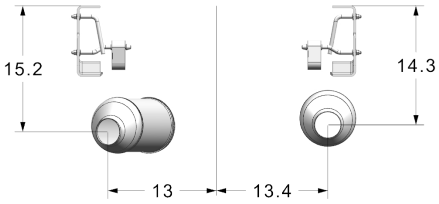

SILENCER DIMENSIONS

TOP OF FRAME TO LOWEST POINT ON SILENCER

Figure 30

CATALYTIC CONVERTER DETAIL

CONVERTER LOCATIONS


15.2
14.3
13
13.4

CONVERTER DETAIL DIMENSIONS

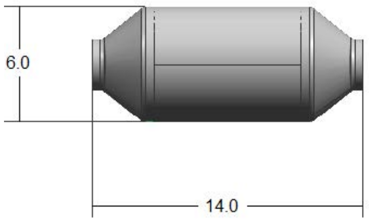


Figure 31

Dimensions in inches

Cab Tilt Illustration

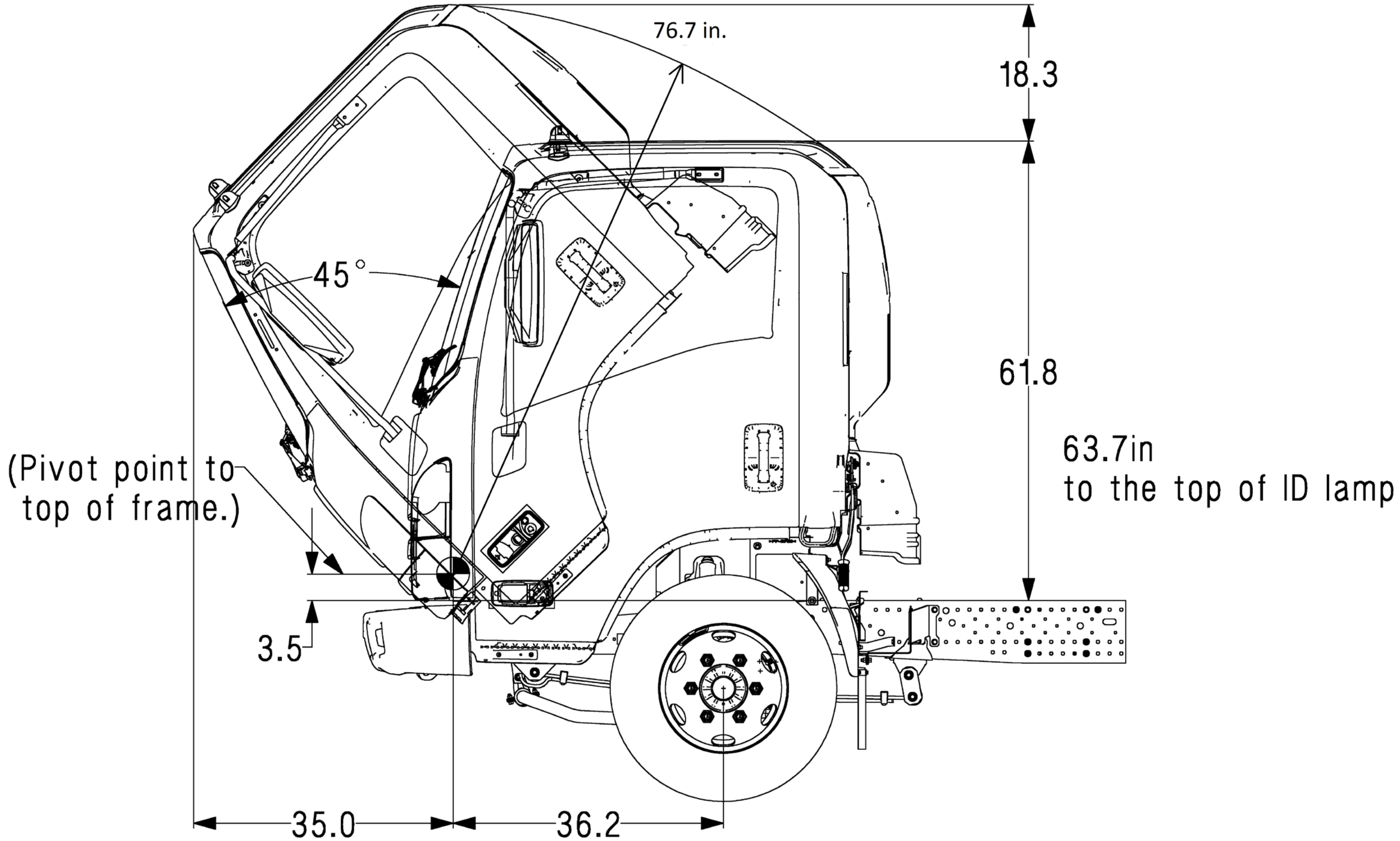
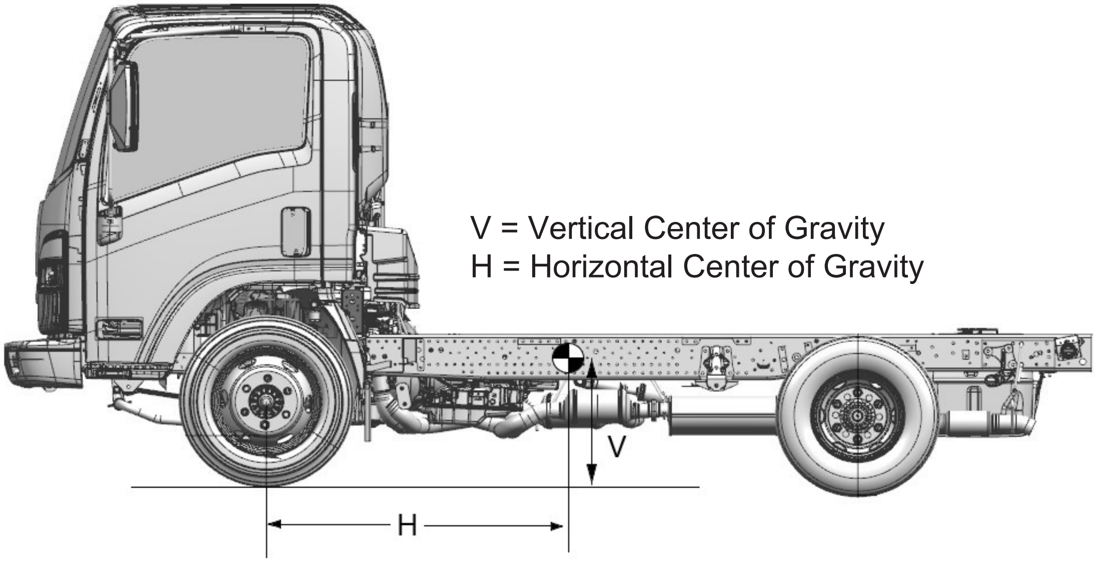

76.7 in.
18.3
45°
61.8
63.7in
to the top of ID lamp
(Pivot point to
top of frame.)
3.5
35.0
36.2

Figure 32

Dimensions in inches

Center of Gravity


V = Vertical Center of Gravity
H = Horizontal Center of Gravity
V
H

Horizontal and Vertical Center of Gravity of Chassis			
GVWR	Wheelbase (in)	Vertical CG - **V** (in)	Horizontal CG - **H** (in)
12,000 lbs.	109	23.8	39.9
	132.5	23.7	48.3
	150	23.6	54.4
	176	23.6	63.7
14,500 lbs.	109	23.8	41.3
	132.5	23.7	49.9
	150	23.7	56.2
	176	23.6	64.3
17,950 lbs.	132.5	24.9	48.6
	150	25.0	54.7
	176	24.9	63.4
	200	24.9	65.3
19,500 lbs.	132.5	24.9	50.3
	150	25.1	56.6
	176	25.0	65.0
	200	25.0	66.9
	212	24.8	67.1

Figure 33

The maximum vertical center of gravity must not be exceeded at maximum GVWR and rated front and rear GAWR. The center of gravity maximum is 63" (1600mm) above ground. The horizontal center of gravity must be located between the front and rear axles.

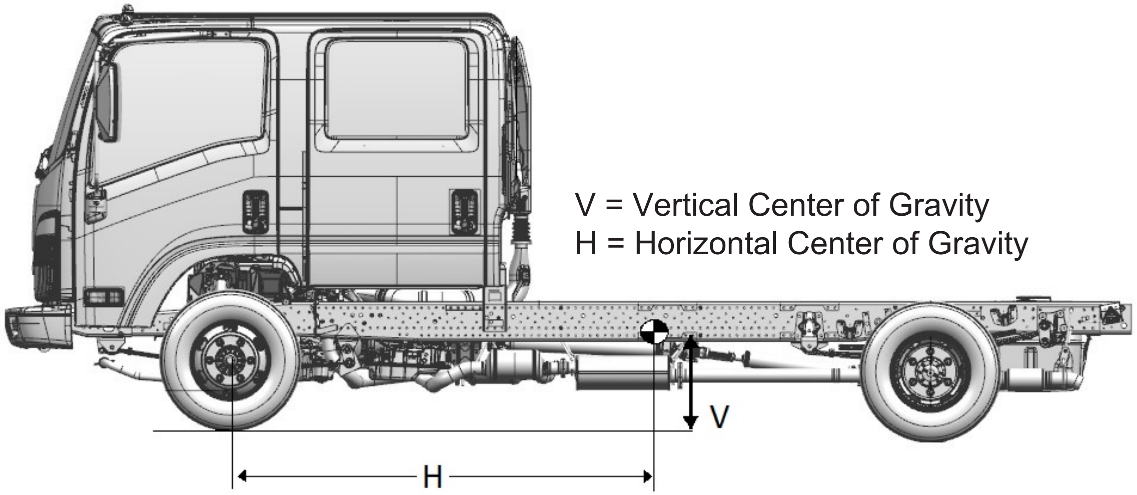
NOTE: The Final Manufacturer must ensure that the combined vertical center of gravity of the chassis, body, and available payload at full GVW does not exceed the maximum vertical center of gravity outlined in the IVD and the Body Builders Manual.

The maximum dimensions for a body installed on the Low Cab Forward chassis are 102 inches wide (outside[1]) by 91 inches high (inside). If approval is needed for larger body applications, please contact GM Upfiter Integration Team at www.gmupfitter.com.

[1] With 102 inches wide mirror brackets installed in place of standard mirror brackets

Dimensions in inches

Center of Gravity



V = Vertical Center of Gravity
H = Horizontal Center of Gravity
V
H

Horizontal and Vertical Center of Gravity of Chassis

GVWR	Wheelbase (in)	Vertical CG - **V** (in)	Horizontal CG - **H** (in)
12,000 lbs.	150	25.9	53.6
	176	28.8	62.4
14,500 lbs.	150	26.9	55.3
	176	26.9	64.3
17,950 lbs.	150	27.9	55.1
	176	28.0	63.2
	200	28.0	65.1
19,500 lbs.	150	28.0	55.7
	176	28.1	63.9
	200	28.1	65.8
	212	27.9	66.0

Figure 34

The maximum vertical center of gravity must not be exceeded at maximum GVWR and rated front and rear GAWR. The center of gravity maximum is 63" (1600mm) above ground. The horizontal center of gravity must be located between the front and rear axles.

NOTE: The Final Manufacturer must ensure that the combined vertical center of gravity of the chassis, body, and available payload at full GVW does not exceed the maximum vertical center of gravity outlined in the IVD and Body Builders Manual.

The maximum dimensions for a body installed on the Low Cab Forward chassis are 102 inches wide (outside[1]) by 91 inches high (inside). If approval is needed for larger body applications, please contact please contact GM Upfiter Integration Team at www.gmupfitter.com.

[1] With 102 inches wide mirror brackets installed in place of standard mirror brackets

Dimensions in inches

Front Axle Chart

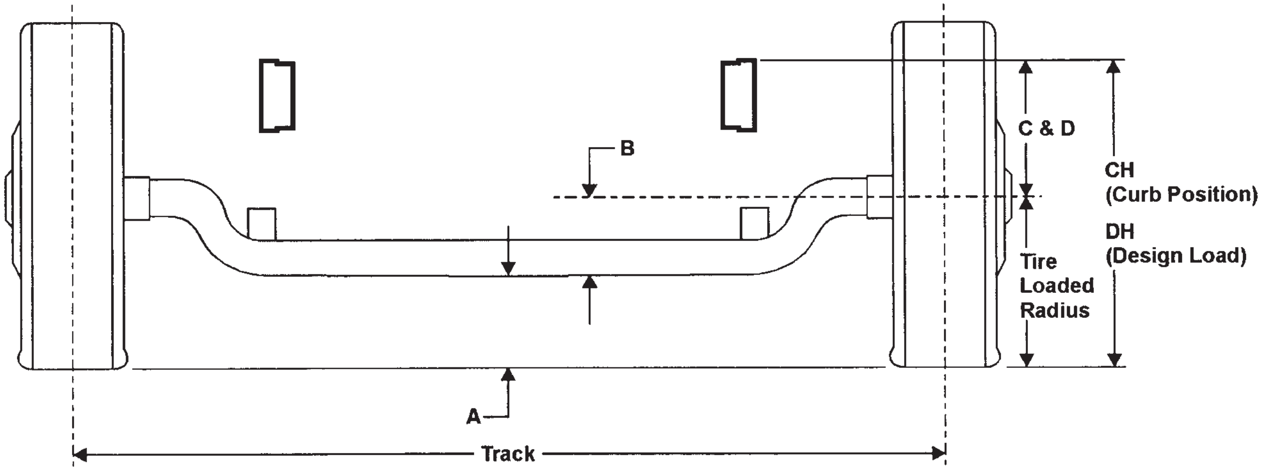


Figure 35

Formulas for calculating height dimensions:

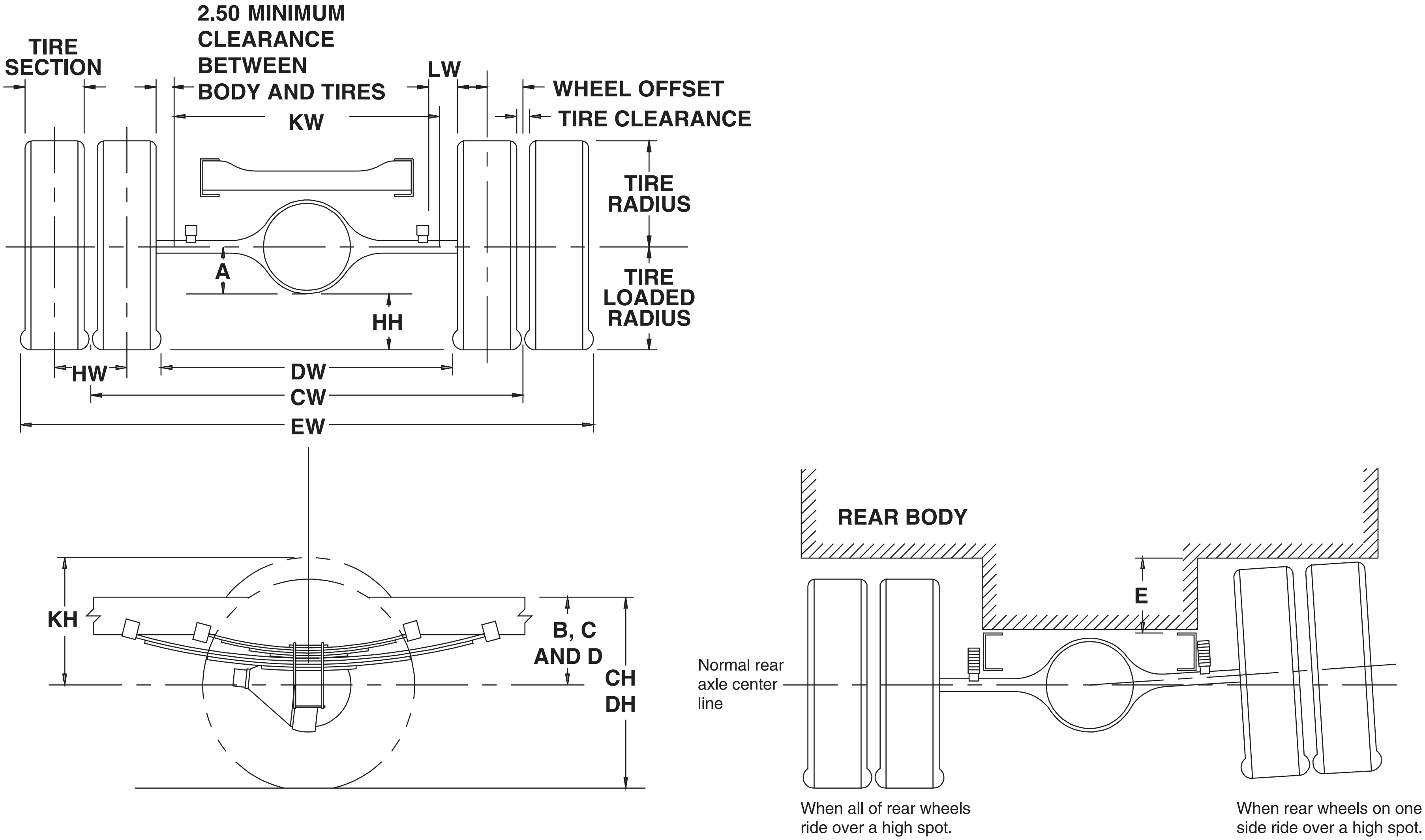
A = Tire Loaded Radius – B
C = Centerline of Axle to Top of Frame Rail at Curb Position
D = Centerline of Axle to Top of Frame Rail at Design Load
CH = C + Tire Unloaded Radius
DH = D + Tire Loaded Radius

Tire	GVWR	GAWR	A	B	C	D	CH	DH	Track	Tire Radius	
										Unloaded	Loaded
215/85R 16-E	12,000 lbs.	4,860 lbs.	7.5	6.6	12.9	12.2	27.5	26.3	65.5	14.6	14.1
225/70R 19.5-F	14,500 lbs.	6,630 lbs.	8.3	6.6	13	11.5	29	26.4	65.5	16	14.93
225/70R 19.5G	17,950 lbs.	6,830 lbs.	8.5	6.5	12.6	11.7	27.6	26.7	66.2	16.1	15.0
225/70R 19.5G	19,500 lbs.	7,275 lbs.	8.5	6.5	12.6	11.9	27.6	26.9	66.2	16	14.9

Figure 36

Dimensions in inches

Rear Axle Chart


2.50 MINIMUM CLEARANCE BETWEEN BODY AND TIRES
TIRE SECTION
LW
WHEEL OFFSET
TIRE CLEARANCE
KW
TIRE RADIUS
A
TIRE LOADED RADIUS
HH
HW
DW
CW
EW
KH
B, C AND D
CH
DH
REAR BODY
E
Normal rear axle center line

When all of rear wheels ride over a high spot.

When rear wheels on one side ride over a high spot.

Figure 37

Definitions			
A	Centerline of axle to bottom of axle bowl.	DW	Minimum distance between the inner surfaces of the rear tires.
B	Centerline of axle to top of frame rail at metal-to-metal position.		
C	Centerline of axle to top of frame rail at curb position.	EW	Maximum Rear Width: Overall width of the vehicle measured at the outermost surface of the rear tires.
D	Centerline of axle to top of frame rail at design load.	HH	Rear Tire Clearance: Minimum clearance between the rear axle and the ground-line.
E	Rear Tire Clearance: Minimum clearance required for tires and chain measured from the top of the frame at the vertical centerline of the rear axle, when rear wheels on one side ride over a high spot.	HW	Dual Tire Spacing: Distance between the centerlines of the tires in a set of dual tires.
CH	Rear Frame Height: Vertical distance between the normal top of frame rail and the ground-line through the centerline of the rear axle at curb position.	KH	Tire Bounce Clearance: Minimum distance required for tire bounce as measured from the centerline of the rear axle and the top of the rear tire when one wheel rides over a high spot.
DH	Rear Frame Height: Vertical distance between the normal top of frame rail and the ground-line through the centerline of the rear axle at design load.	CW	Track Dual Rear Wheel Vehicles: Distance between the centerlines of the dual wheels measured at the ground-line.
	Tire Section, Tire Radius, Tire Loaded Radius, Tire Clearance		See Tire Chart for Values

Formulas for Calculating Rear Width and Height Dimensions			
CW	= Track	HH	= Tire loaded radius – A
CH	= Tire loaded radius + C	JH	= KH – B
DH	= Tire loaded radius + D	KH	= Tire radius + 3.00 inches
DW	= Track + 2 tire sections – tire clearance	KW	= DW – 5.00 inches
EW	= Track + 2 tire sections + tire clearance	LW	= 1.00-inch minimum clearance between tires and springs

NOTE: Track and overall width may vary with optional equipment.

Figure 38

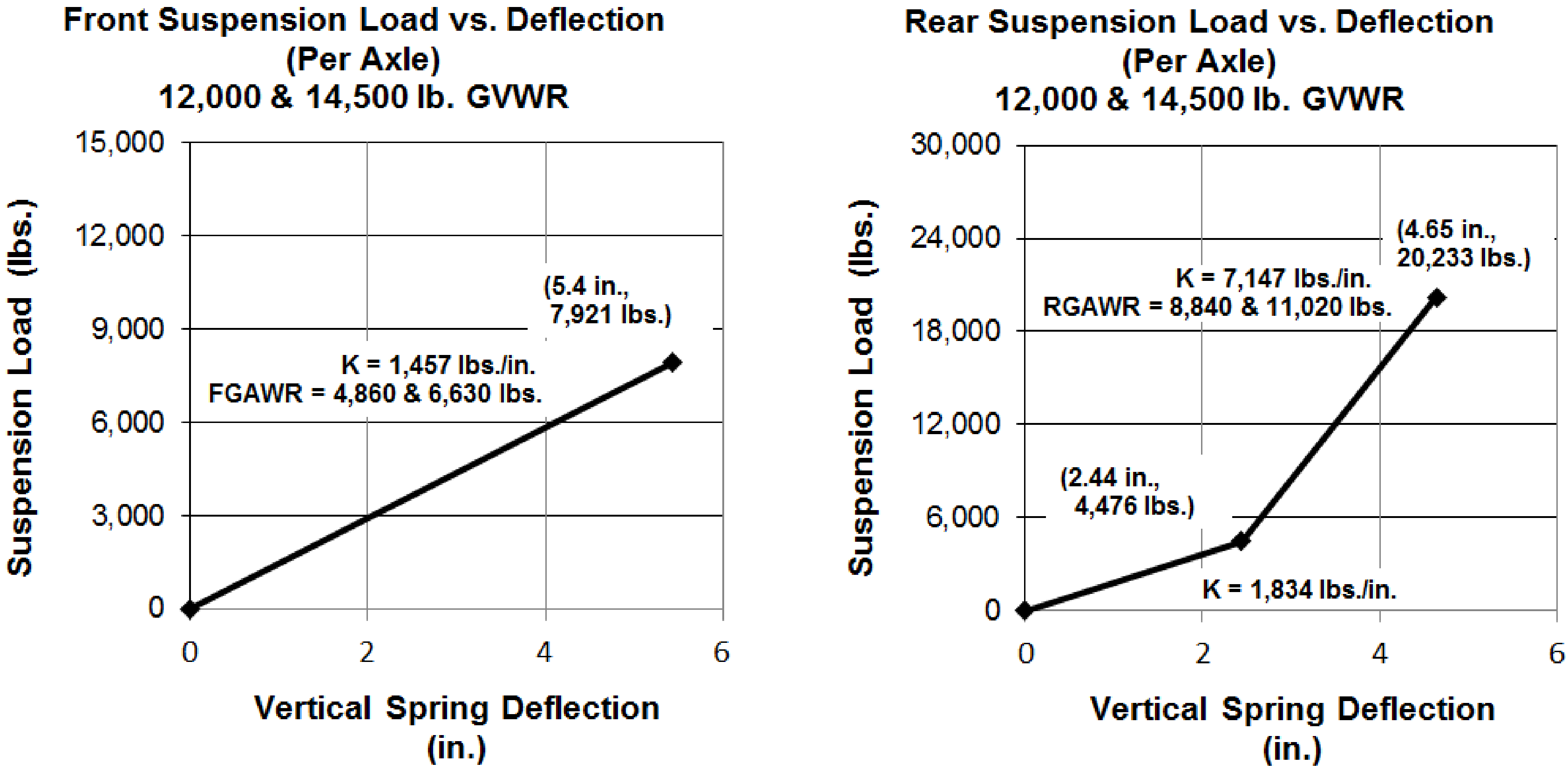
Tire	GAWR	Track CW	A	B	C	D	E
215/85R 16-E	8,840 lbs.	65.0	6.5	9.3	15.4	13.0	7.8
225/70R 19.5-F	11,020 lbs.	65.0	7.7	9.3	15.6	13.4	8.4
225/70R 19.5G	13,660 lbs.	65.9	7.6	9.3	15.3	14.1	8.4 [1]
225/70R 19.5G	14,460 lbs.	65.9	7.6	9.3	15.3	13.9	8.4 [1]

[1] - Previous Model. Update Coming Soon

Figure 39

Dimensions in inches

Suspension Deflection Charts – 3500 HG / 4500 HG Gas


Front Suspension Load vs. Deflection (Per Axle) 12,000 & 14,500 lb. GVWR

Rear Suspension Load vs. Deflection (Per Axle) 12,000 & 14,500 lb. GVWR

Figure 40

Suspension Deflection Charts – 5500 HG Gas

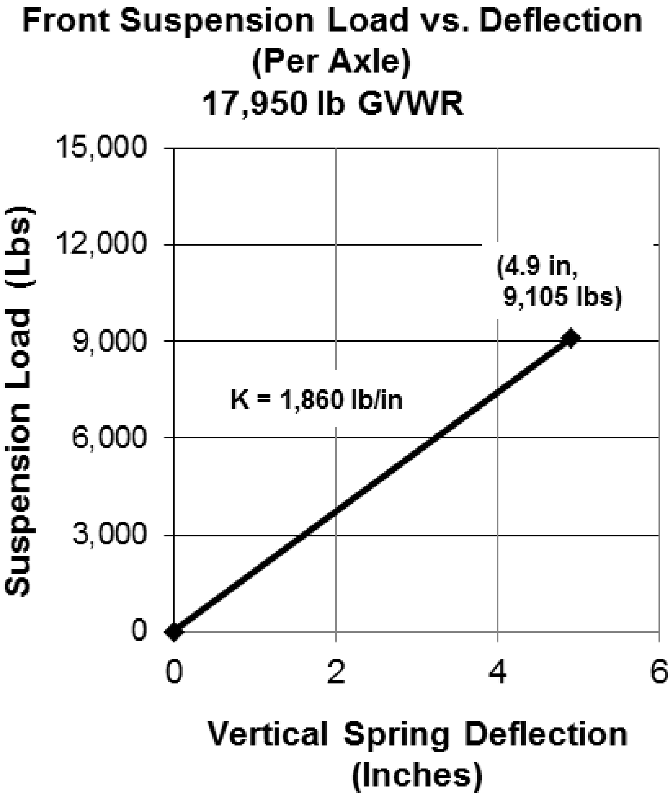


Figure 41

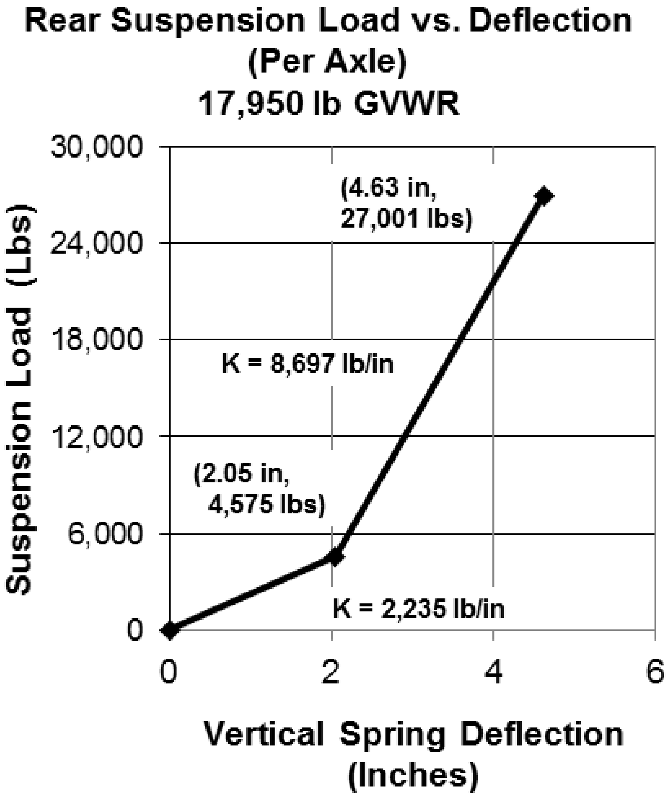


Figure 42

Suspension Deflection Charts – 5500 XG Gas

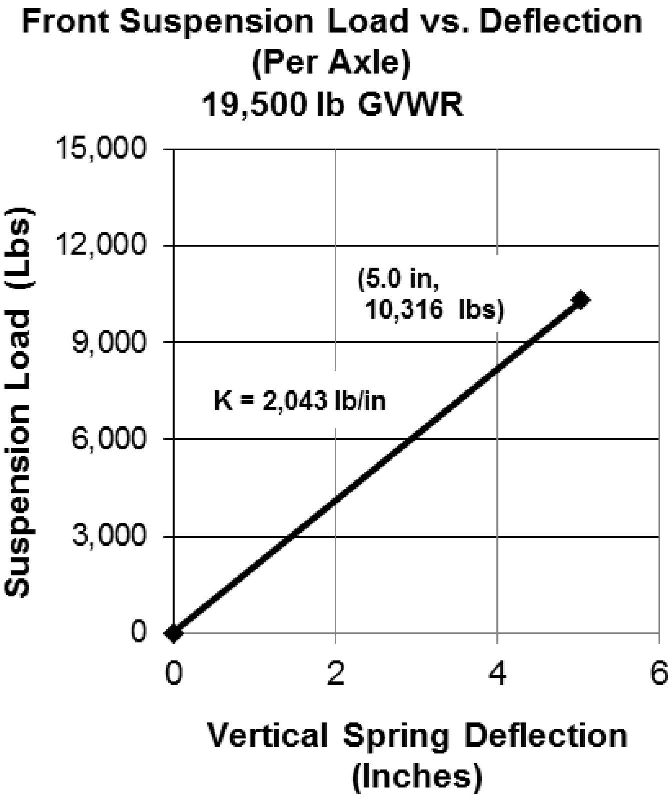


Figure 43

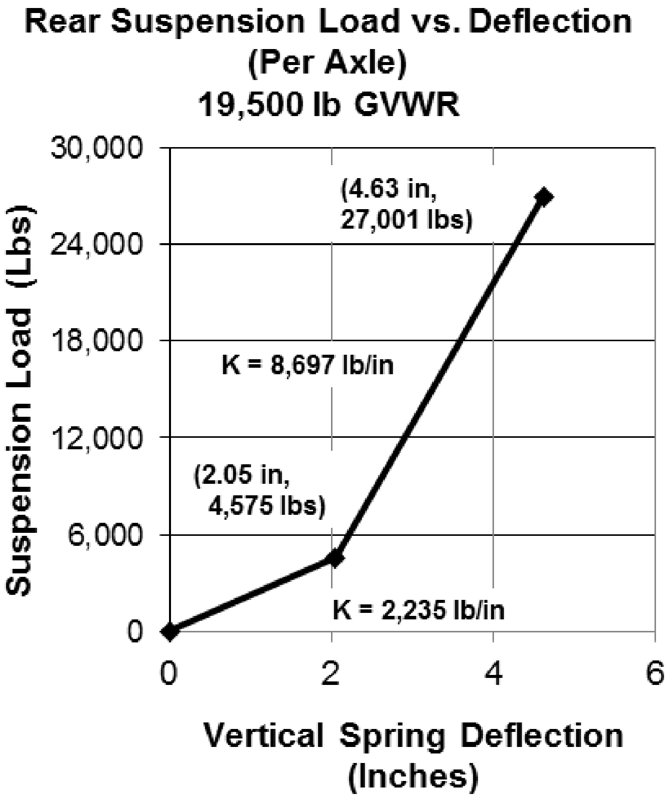
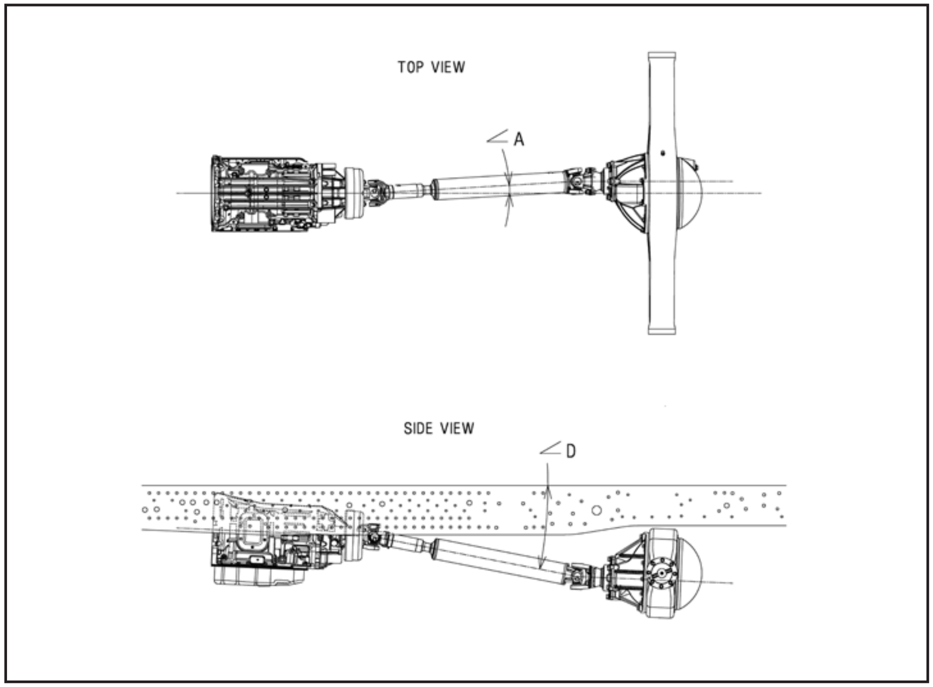
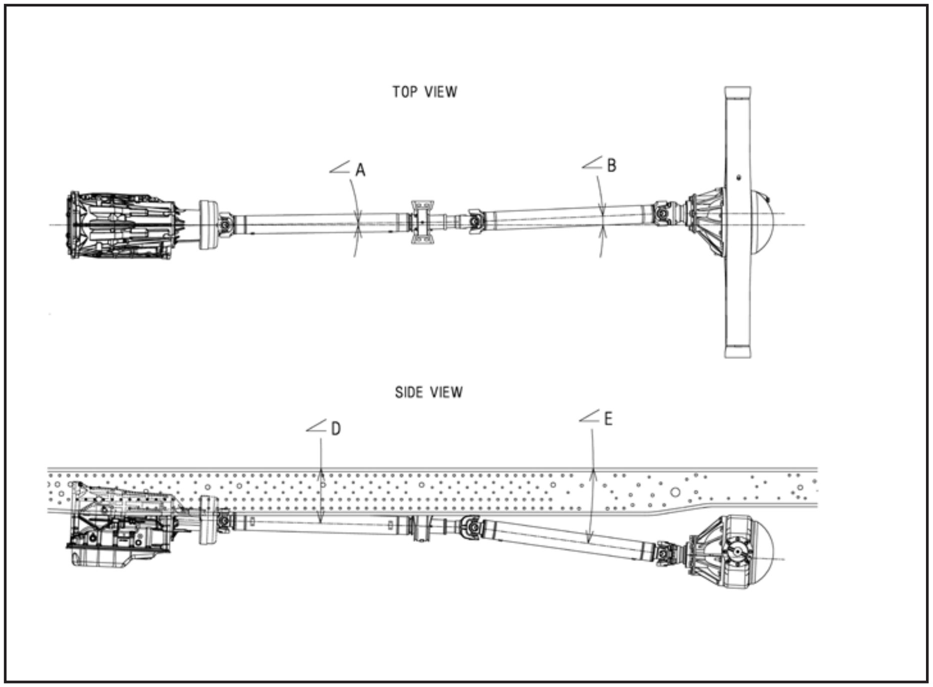


Figure 44

Propeller Shaft - 3500 HG / 4500 HG





Wheelbase (in.)	Top View		Side View			
	∠A	∠B	∠D	∠E	Trans	Rear Axle
109	3.2°	-	9.1°	-	2.5°	2.5°
132.5	1.5°	2.3°	3.0°	7.7°	2.5°	2.5°
150	0.8°	2.5°	1.5°	8.0°	2.5°	2.5°
176	0.6°	1.7°	2.0°	4.5°	2.5°	2.5°

Figure 46

NOTE: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard equipment, fuel but no driver, body or payload.

Propeller Shaft - 3500 HG / 4500HG

Wheelbase	109	132.5	150	176
No. of Shafts	1	2	2	2
Trans. Type	A/T	A/T	A/T	A/T
Shaft #1 O.D. (Inches)	3.25			
Thickness (Inches)	0.0906			
L (Inches)	35.51	21.73	35.91	46.54
Type	A	B	B	B
Shaft #2 O.D. (Inches)	3.25			
Thickness (Inches)	0.0906			
L (Inches)	N/A	31.38	34.92	50.08
Type	N/A	C	C	C

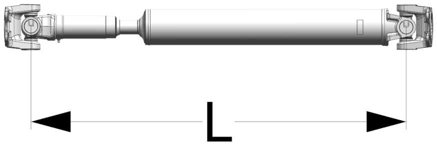
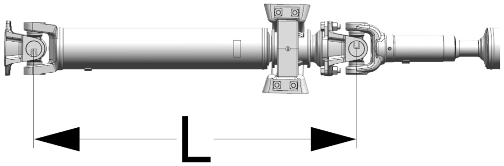
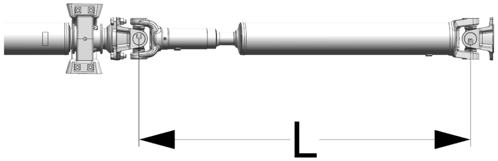
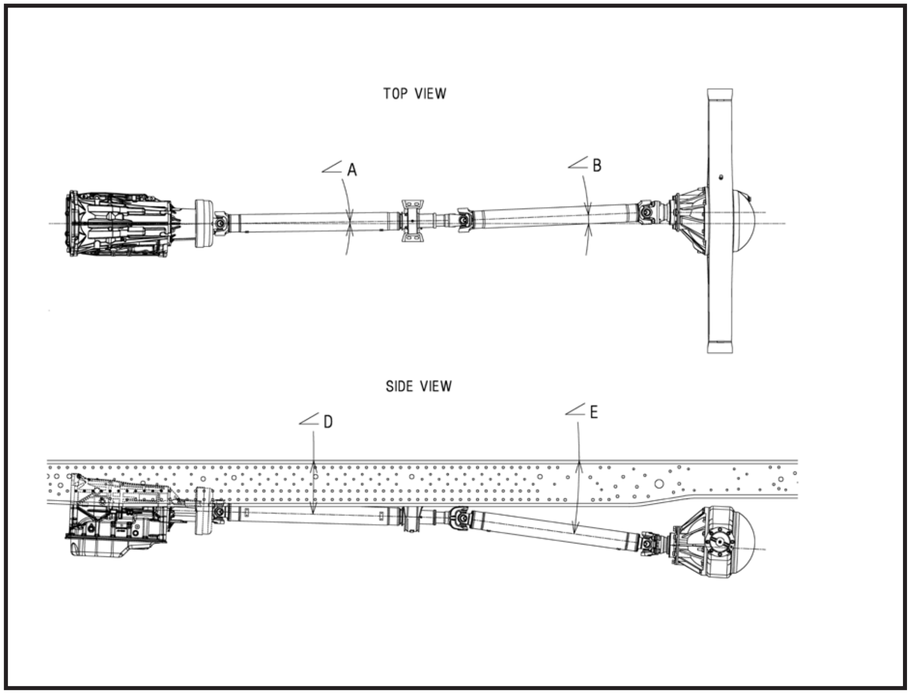
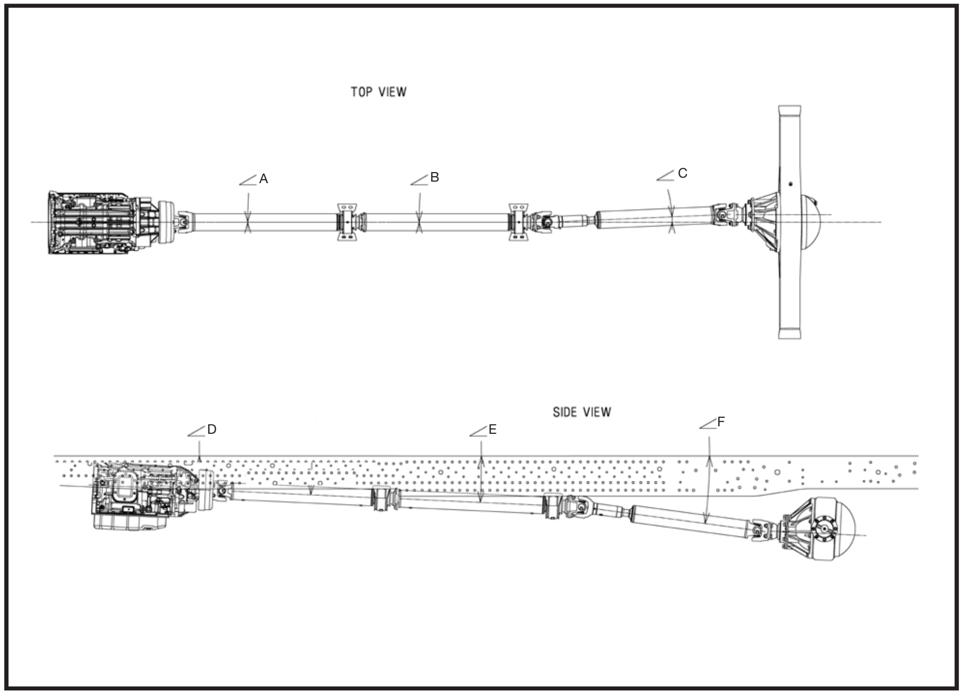
Type	Description	Illustration
Type **A**	1st shaft in 1-piece driveline	
Type **B**	1st shaft in 2-piece driveline	
Type **C**	2nd shaft in 2-piece driveline	

Figure 47

Dimensions in inches

Propeller Shafts - 5500 HG / 5500 HG





Wheelbase	Top View (degrees)			Side View (degrees)				
(in.)	∠A	∠B	∠C	∠D	∠E	∠F	Trans	Rear Axle
132.5	1.5	3.0	-	3.7	7.5	-	2.5	2.5
150	0.8	3.1	-	2.8	6.6	-	2.5	2.5
176	0.6	2.2	-	2.0	4.8	-	2.5	2.5
200	0.5	0.2	2.3	2.9	3.0	3.5	2.5	2.5
212	0.4	0.2	2.2	3.0	1.6	3.8	2.5	2.5

Figure 48

NOTE: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard equipment, fuel but no driver, body or payload.

Propeller Shaft - 5500 HG / 5500 XG

5500 HG & 5500 XG GAS STANDARD CAB					
Wheelbase	132.5	150	176	200	212
No. of Shafts	2	2	2	3	3
Shaft #1 O.D.	3.54	3.54	3.54	3.54	3.54
Thickness	0.126	0.126	0.126	0.126	0.126
Length	23.90	41.02	51.85	52.42	52.61
Type	D	D	D	D	D
Shaft #2 O.D.	3.54	3.54	3.54	3.54	3.54
Thickness	0.126	0.126	0.126	0.126	0.126
Length	36.01	36.54	51.60	24.10	36.10
Type	A	A	A	A	A
Shaft #3 O.D.	-	-	-	3.54	3.54
Thickness	-	-	-	0.126	0.126
Length	-	-	-	51.83	51.63
Type	-	-	-	D	D

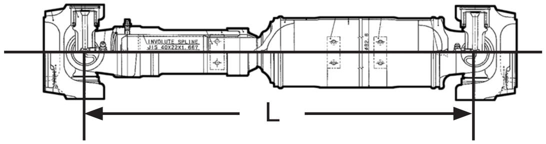
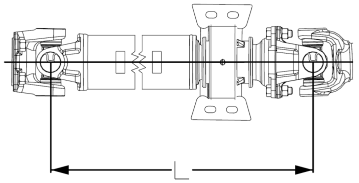
Type	**Description**	**Illustration**
Type **A**	2nd shaft in 2 piece driveline.	
Type **D**	1st shaft in 2 piece driveline.	

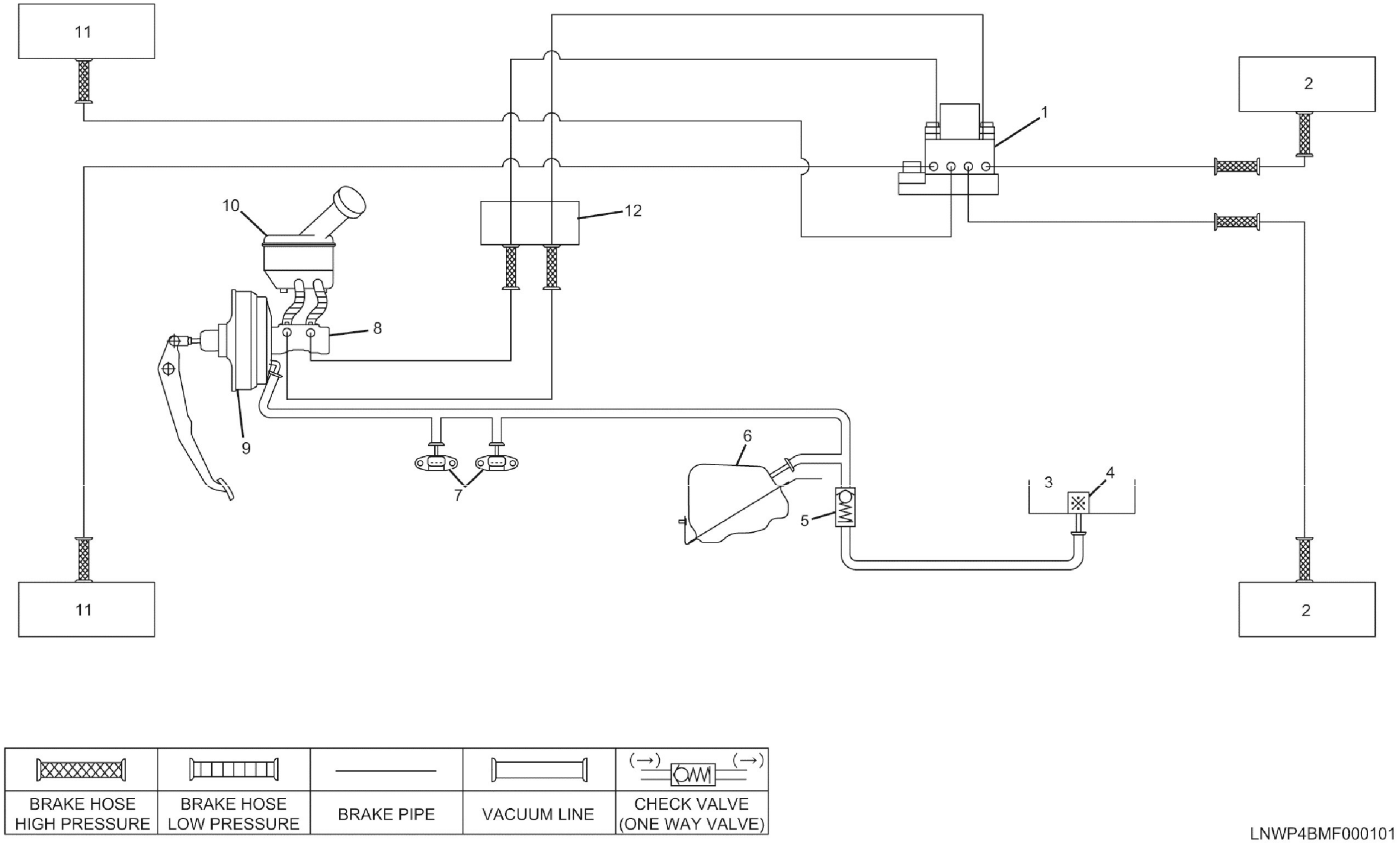
Figure 49

Dimensions in inches

Brake System Diagram - 3500 HG / 4500 HG

Vacuum Over Hydraulic

Please refer to Introduction Section of book for antilock system cautions and wheelbase modification requirements.


11
2
1
12
10
8
9
6
7
3
4
5
11
2
BRAKE HOSE HIGH PRESSURE
BRAKE HOSE LOW PRESSURE
BRAKE PIPE
VACUUM LINE
(→) (→)
CHECK VALVE (ONE WAY VALVE)
LNWP4BMF000101

Legend

(1) Electronic Hydraulic Control Unit (EHCU)
(2) Rear Brake
(3) Vacuum Pump
(4) Check Valve
(5) Check Valve (One-way Valve)
(6) Vacuum Tank
(7) Vacuum Sensor
(8) Vacuum Booster (Servo Unit)
(9) Master Cylinder
(10) Brake Fluid Reservoir
(11) Front Brake
(12) 4-way Connector

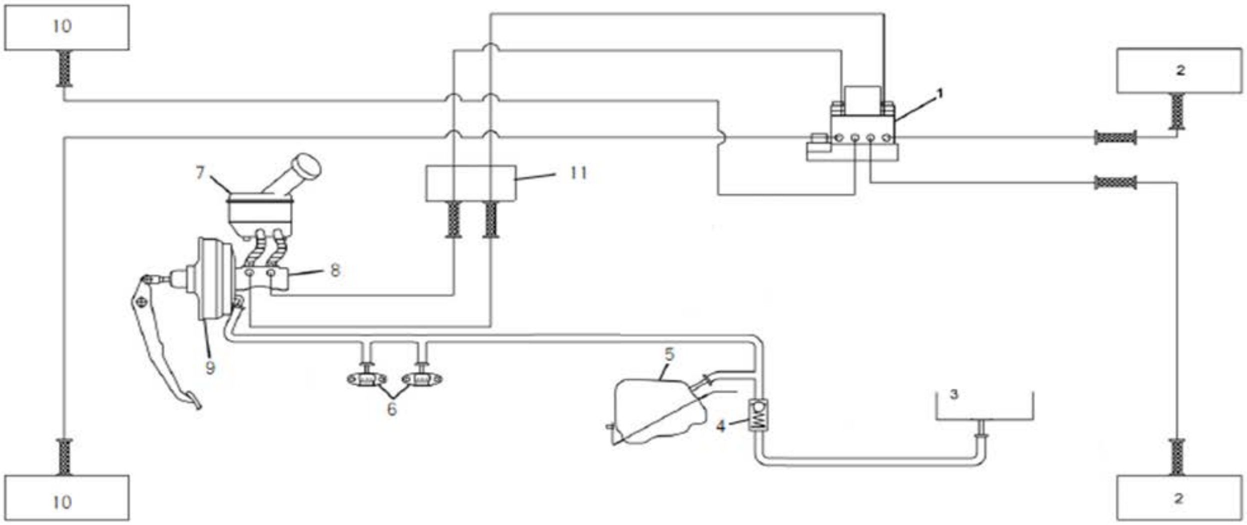
Figure 50

Brake System Diagram - 5500 HG / 5500 XG

Vacuum Plus Power Assist

Please refer to Introduction Section of book for antilock system cautions and wheelbase modification requirements.

Legend	
1	EHCU
2	Rear brake
3	Vacuum pump
4	Check valve
5	Vacuum tank
6	Vacuum sensor
7	Brake fluid tank
8	Master cylinder
9	Vacuum brake booster (servo unit)
10	Front brake
11	4-way connector


10
2
1
11
7
8
9
6
5
4
3
10
2

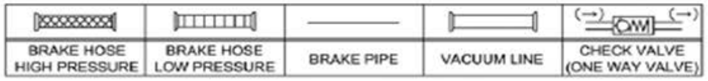
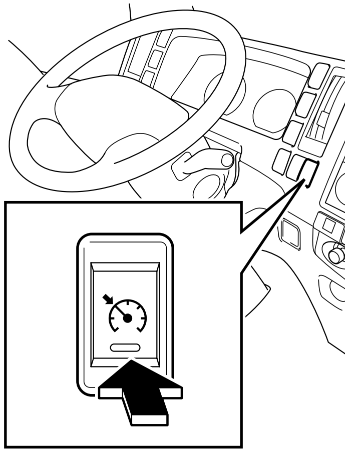

BRAKE HOSE HIGH PRESSURE
BRAKE HOSE LOW PRESSURE
BRAKE PIPE
VACUUM LINE
CHECK VALVE (ONE WAY VALVE)

Figure 51

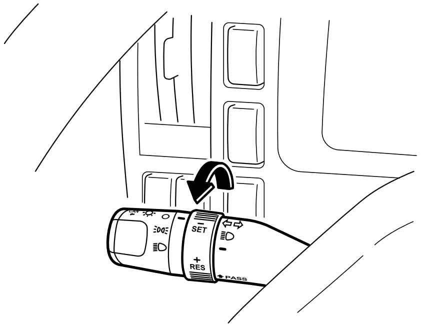
High Idle Mode

Use high idle mode to increase engine idle speed to 1,200 r/min when the vehicle is stationary.

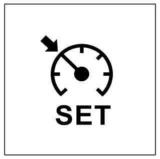
Cruise control main switch



Cruise control set switch



Cruise set indicator light



Activating High Idle Mode

Follow the below procedure to activate the high idle mode.

1. Set the parking brake.
2. Set the selector lever in "P" (Park) or "N" (Neutral) position.
3. Do not depress the brake pedal.
4. Press the cruise control main switch to set it to "ON". At this time, the operation indicating light will turn to green.
5. Turn and hold the cruise control set switch in the "SET" position. After approximately 3 seconds the cruise control set indicator light will begin to flash slowly and the engine idle will increase to 1,200 r/min.

L8T 6.6L FRONT END ACCESSORY DRIVE

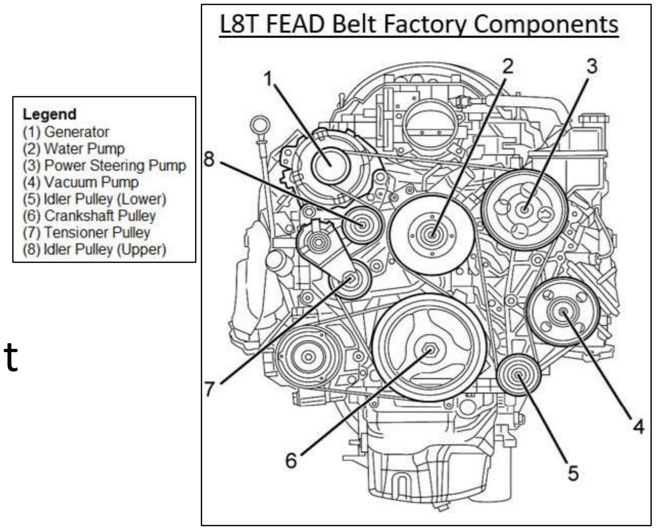
The L8T engine’s Front End Accessory Drive (FEAD) can mount a range of equipment:

- Additional compressors for an engine driven refrigeration unit or auxiliary HVAC system.
- Clutch pumps for hydraulicly powered equipment.
- Additional alternator for electrical equipment.

FEAD output for GM L8T 6.6L Gasoline Engine

- 13 hp @ 900 rpm
- 17 hp @ 1200 rpm
- 21 hp @ 1500+ rpm

❖Accompanying aftermarket bracket(s) and a new belt routing design are required for most situations.



L8T FEAD Belt Factory Components

Legend
(1) Generator
(2) Water Pump
(3) Power Steering Pump
(4) Vacuum Pump
(5) Idler Pulley (Lower)
(6) Crankshaft Pulley
(7) Tensioner Pulley
(8) Idler Pulley (Upper)

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	4500 HD
GVWR / GCWR	14,500 lbs./ 20,500 lbs.
WB	109 in., 132.5 in, 150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 sq.in. radiator; 7 blade 20.1 in diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control. Electronic Stability Control (ESC) with Anti-Slip Regulation(ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	5,360 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	9,880 lbs.
Wheels	16 x 6.0-K 6-hole disc wheels, painted white.
Tires	215/85R-16E (10 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 54,800 psi section modulus 6.65 cubic in, RBM 364,420 lb-in per rail.
Cab	All steel, low cab forward, BBC 65.9 in, 45° mechanical tilt with torsion assist.
Cab Equipment	Gray breathable cloth covered high back driver’s seat equipped with an armrest along with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

Chassis Specifications

Model	4500 HD CREW
GVWR / GCWR	14,500 lbs./ 20,500 lbs.
WB	150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 sq.in. radiator; 7 blade 20.1 in diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control. Electronic Stability Control (ESC) with Anti-Slip Regulation(ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	5,360 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	9,880 lbs.
Wheels	16 x 6.0-K 6-hole disc wheels, painted white.
Tires	215/85R-16E (10 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame. Yield strength of 54,800 psi, section modulus 11.87 cubic in, RBM 576,350 lb-in per rail.
Cab	All-steel, low cab forward, BBC 105.2 in., 7-passenger seating.
Cab Equipment	Gray breathable cloth covered high back driver’s seat equipped with an armrest along with two occupant passenger seat and four occupant rear bench seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	**4500 XD**
GVWR / GCWR	16,000 lbs./ 22,000 lbs.
WB	109 in., 132.5 in, 150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 sq.in. radiator; 7 blade 20.1 in diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control. Electronic Stability Control (ESC) with Anti-Slip Regulation(ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot "I"-Beam rated at 6,830 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	6,630 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	11,020 lbs.
Wheels	19.5 X 6.0-K 6-hole disc wheels, painted white
Tires	225/70R-19.5 F (12 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 54,800 psi section modulus 6.65 cubic in, RBM 364,420 lb-in per rail.
Cab	All steel, low cab forward, BBC 65.9 in, 45˚ mechanical tilt with torsion assist.
Cab Equipment	Gray breathable cloth covered high back driver's seat equipped with an armrest along with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

Chassis Specifications

Model	4500 XD CREW
GVWR / GCWR	16,000 lbs./ 22,000 lbs.
WB	150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 square in. radiator; 7 blade 20.1 in. diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control, Electronic Stability Control (ESC) with Anti-Slip Regulation (ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot “I”-Beam rated at 6,830 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	6,630 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 11,020 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	11,020 lbs.
Wheels	19.5 x 6.0-K 6-hole disc wheels, painted white.
Tires	225/70R-19.5F (12 ply) LRR (Low Rolling Resistance) tubeless steel belted radials, all-season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame. Yield strength of 54,800 psi, section modulus 11.87 cubic in, RBM 576,350 lb-in per rail.
Cab	All-steel, low cab forward, BBC 105.2 in., 7-passenger seating.
Cab Equipment	Gray breathable cloth covered high back driver’s seat equipped with an armrest along with two occupant passenger seat and four occupant rear bench seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	5500 XD DERATE
GVWR / GCWR	17,950 lbs./ 23,950 lbs.
WB	109 in., 132.5 in, 150 in., 176 in.. 200 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 square in. radiator; 7 blade 20.1 in. diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control, Electronic Stability Control (ESC) with Anti-Slip Regulation (ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot "I"-Beam rated at 7,275 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	6,830 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	12,980 lbs.
Wheels	19.5 X 6.0-K 6-hole disc wheels, painted white
Tires	225/70R-19.5F (12 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 54,800 psi section modulus 6.65 cubic in, RBM 364,420 lb-in per rail.
Cab	All steel, low cab forward, BBC 65.9 in, 45˚ mechanical tilt with torsion assist.
Cab Equipment	Gray breathable cloth covered high back driver's seat equipped with an armrest along with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

Chassis Specifications

Model	5500 XD DERATE CREW
GVWR / GCWR	17,950 lbs./ 23,950 lbs.
WB	150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 square in. radiator; 7 blade 20.1 in. diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control, Electronic Stability Control (ESC) with Anti-Slip Regulation (ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot “I”-Beam rated at 7,275 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	6,830 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 14,550 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	12,980 lbs.
Wheels	19.5 x 6.0-K 6-hole disc wheels, painted white.
Tires	225/70R-19.5F (12 ply) LRR (Low Rolling Resistance) tubeless steel belted radials, all-season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame. Yield strength of 54,800 psi, section modulus 11.87 cubic in, RBM 576,350 lb-in per rail.
Cab	All-steel, low cab forward, BBC 105.2 in., 7-passenger seating.
Cab Equipment	Gray breathable cloth covered high back driver’s seat equipped with an armrest along with two occupant passenger seat and four occupant rear bench seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	5500 XD
GVWR / GCWR	19,500 lbs./ 25,500 lbs.
WB	109 in., 132.5 in, 150 in., 176 in.. 200 in., 212 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 square in. radiator; 7 blade 20.1 in. diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control, Electronic Stability Control (ESC) with Anti-Slip Regulation (ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot "I"-Beam rated at 7,275 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	7,275 lbs.
Rear Axle	Full floating single speed with hypoid gearing rated at 14,550 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	13,660 lbs.
Wheels	19.5 X 6.0-K 6-hole disc wheels, painted white
Tires	225/70R-19.5F (12 pr) LRR (Low Rolling Resistance) tubeless steel belted radials, all season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame.Yield strength 54,800 psi section modulus 6.65 cubic in, RBM 364,420 lb-in per rail.
Cab	All steel, low cab forward, BBC 65.9 in, 45˚ mechanical tilt with torsion assist.
Cab Equipment	Gray breathable cloth covered high back driver's seat equipped with an armrest along with two occupant passenger seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

Chassis Specifications

Model	5500 XD CREW
GVWR / GCWR	19,500 lbs./ 25,500 lbs.
WB	150 in., 176 in.
Engine	Isuzu 4-cylinder, in-line 4-cycle, turbocharged, intercooled, direct injection diesel.
Model/Displacement	4HK1-TC/317 CID (5.19 liters)
HP (Gross)	215 HP @ 2500 RPM
Torque (Gross)	452 lb/ft torque @ 1850 RPM
Equipment	Dry element air cleaner with vertical intake; 2 rows 564 square in. radiator; 7 blade 20.1 in. diameter fan with viscous drive. Cold weather starting device and an oil cooler. Engine oil level check. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function. Rear engine cover. Engine cruise control, Electronic Stability Control (ESC) with Anti-Slip Regulation (ASR).
Transmission	Aisin A465id 6 speed automatic transmission with fifth and sixth gear overdrive with lock up in 2nd, 3rd, 4th, 5th and 6th. PTO capability with automatic torque converter lockup in stationary PTO mode.
Steering	Integral power steering 18.8-20.9:1 ratio. Tilt and telescoping steering column.
Front Axle	Reverse Elliot “I”-Beam rated at 7,275 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers.
Front GAWR	7,275 lbs.
Rear Axle	Full-floating single speed with hypoid gearing rated at 14,550 lbs.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs and shock absorbers.
Rear GAWR	13,660 lbs.
Wheels	19.5 x 6.0-K 6-hole disc wheels, painted white.
Tires	225/70R-19.5F (12 ply) LRR (Low Rolling Resistance) tubeless steel belted radials, all-season, front and rear.
Tire Pressure Monitoring System (TPMS)	Tire pressure sensors are installed onto each wheel to detect changes in tire pressure and tire temperature. TPMS status will be displayed within the instrument panel.
Brakes	Dual circuit vacuum assisted hydraulic service brakes with EBD (Electronic Brake Distribution) system for load proportioning of the brake system front and rear disc brake. The parking brake is a mechanical, cable actuated, internal expanding drum type, transmission mounted. Vehicles equipped with factory optional ADAS will feature an electronically actuated cable that is controlled by a switch in the dash. The exhaust brake is standard and is vacuum operated. 4-channel anti-lock brake system.
Fuel Tank	30-gallon rectangular stainless steel fuel tank. Mounted between the frame rails with electric type fuel pump (mounted in tank). Through the rail fuel fill. Fuel water separator with indicator light on instrument cluster.
Frame	Ladder type channel section straight frame rail 33.5 in wide through the total length of the frame. Yield strength of 54,800 psi, section modulus 11.87 cubic in, RBM 576,350 lb-in per rail.
Cab	All-steel, low cab forward, BBC 105.2 in., 7-passenger seating.
Cab Equipment	Gray breathable cloth covered high back driver’s seat equipped with an armrest along with two occupant passenger seat and four occupant rear bench seat. Dual cab mounted exterior mirrors with integral convex mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass and air conditioning. AM/FM Radio with Aux input, USB port and Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer. Interior and exterior lights are all LED (excluding the rear taillight assembly). Driver and outboard passenger front supplemental restraint system air bags.
Electrical	12 Volt, negative ground, dual maintenance free batteries, 750 CCA each, 140 Amp alternator with integral regulator.
Options	see page 3 for options

NOTE: These selected specifications are subject to change without notice.

Vehicle Weights, Dimensions, and Ratings

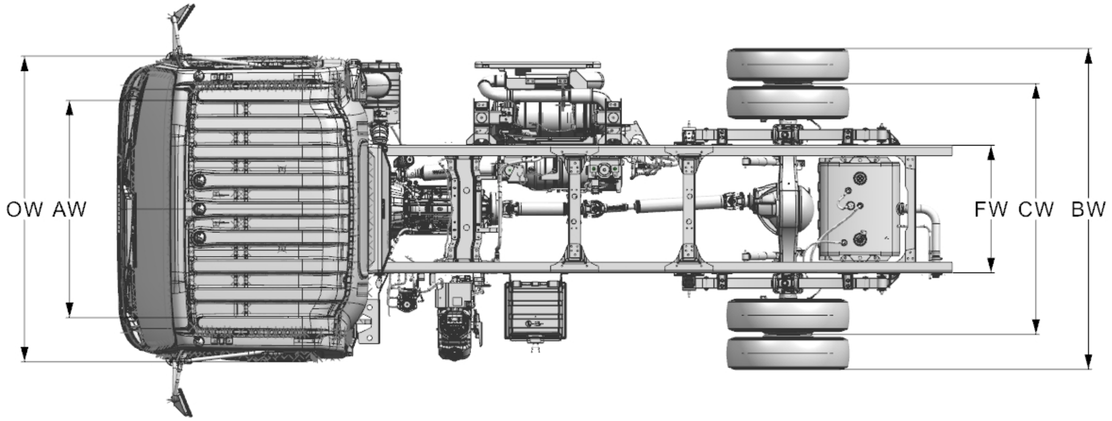


Figure 1

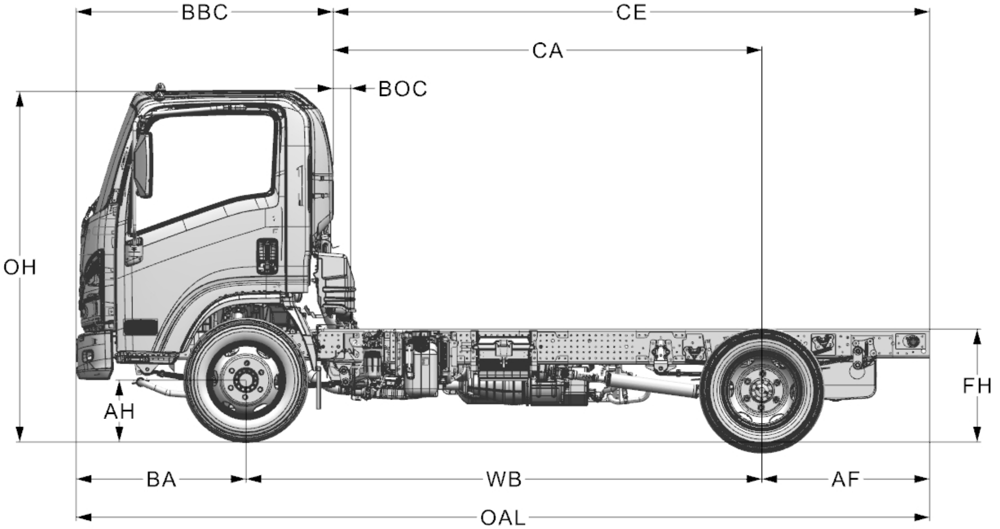


Figure 2

Dimension Constants:

Code	Inches	Code	Inches
AH	7.5	BW	83.3
AW	65.6	CW	65
BA	43.5	FW	33.5
BBC	65.9	OH (16" Tire)	91.3
BOC	7.7	OH (19.5" Tire)	92.9
FH (16" Tire)	31.6	OW	81.3
FH (19.5" Tire)	33.5		

Variable Chassis Dimensions:

Unit	WB	CA*	CE*	OAL	AF
inch	109.0	86.5	129.6	195.7	43.1
inch	132.5	110.0	153.1	219.2	43.1
inch	150.0	127.5	170.6	236.7	43.1
inch	176.0	153.5	196.6	262.7	43.1
inch	200.0[1]	177.5	220.6	286.7	43.1
inch	212.0[2]	189.5	232.6	298.7	43.1

* Effective CA & CE are CA/CE less BOC.

Vertical Exhaust Option Dimensions

Variable Chassis Dimensions:

Unit	WB	EFF CA*	EFF CE*	OAL	AF
inch	109.0	62.5	105.6	195.7	43.1
inch	132.5	86.0	153.1	219.2	43.1
inch	150.0	103.5	146.6	236.7	43.1
inch	176.0	129.5	172.6	262.7	43.1
inch	200.0[1]	153.5	196.6	286.7	43.1
inch	212.0[2]	165.5	208.6	298.7	43.1

* Effective CA & CE are CA/CE less BOC. BOC = 24 in. for Vertical Exhaust equipped chassis

Note:

[1] - Only available on 5500 XD DERATE & 5500 XD

[2] - Only available on the 5500 XD

Vehicle Weights, Dimensions, and Ratings - Standard Cab

4500 HG:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3F154	109.0	lbs.	3986	2044	6030	8470
3F124	109.0	lbs.	3996	2044	6040	8460
3F254	132.5	lbs.	4070	2030	6100	8400
3F224	132.5	lbs.	4080	2030	6110	8390
3F354	150.0	lbs.	4136	1997	6133	8367
3F324	150.0	lbs.	4146	1997	6143	8357
3F454	176.0	lbs.	4209	1964	6173	8327
3F424	176.0	lbs.	4219	1964	6183	8317

4500 XD:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3Y154	109.0	lbs.	4162	2262	6424	9576
3Y124	109.0	lbs.	4172	2262	6434	9566
3Y254	132.5	lbs.	4246	2251	6497	9503
3Y224	132.5	lbs.	4256	2251	6507	9493
3Y354	150.0	lbs.	4325	2203	6528	9472
3Y324	150.0	lbs.	4335	2203	6538	9462
3Y454	176.0	lbs.	4395	2175	6570	9430
3Y424	176.0	lbs.	4405	2175	6580	9420

5500 XD DERATE*:

In-Frame Tank Weights and Payload by Model:

Standard 17,950 GVWR Chassis Weights and Payload by Model

Model	WB	Unit	Front	Rear	Total	Payload
3U154	109.0	lbs.	4171	2359	6530	11420
3U124	109.0	lbs.	4181	2359	6540	11410
3U254	132.5	lbs.	4257	2355	6612	11338
3U224	132.5	lbs.	4267	2355	6622	11328
3U354	150.0	lbs.	4325	2307	6632	11318
3U324	150.0	lbs.	4335	2307	6642	11308
3U454	176.0	lbs.	4398	2281	6679	11271
3U424	176.0	lbs.	4408	2281	6689	11261
3U554	200.0	lbs.	4523	2458	6981	10969
3U524	200.0	lbs.	4533	2458	6991	10959

***Note: 5500 HD Derate available through PIO ordering**

5500 XD:

In-Frame Tank Weights and Payload by Model:

Standard 19,500 GVWR Chassis Weights and Payload by Model

Model	WB	Unit	Front	Rear	Total	Payload
3U154	109.0	lbs.	4171	2359	6530	12970
3U124	109.0	lbs.	4181	2359	6540	12960
3U254	132.5	lbs.	4257	2355	6612	12888
3U224	132.5	lbs.	4267	2355	6622	12878
3U354	150.0	lbs.	4325	2307	6632	12868
3U324	150.0	lbs.	4335	2307	6642	12858
3U454	176.0	lbs.	4398	2281	6679	12821
3U424	176.0	lbs.	4408	2281	6689	12811
3U554	200.0	lbs.	4523	2458	6981	12519
3U524	200.0	lbs.	4533	2458	6991	12509
3U654	212.0	lbs.	4543	2484	7027	12473
3U624	212.0	lbs.	4553	2484	7037	12463

Technical Notes:

Chassis Curb Weight reflects standard equipment and fuel but no driver or payload. Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weights, Dimensions, and Ratings

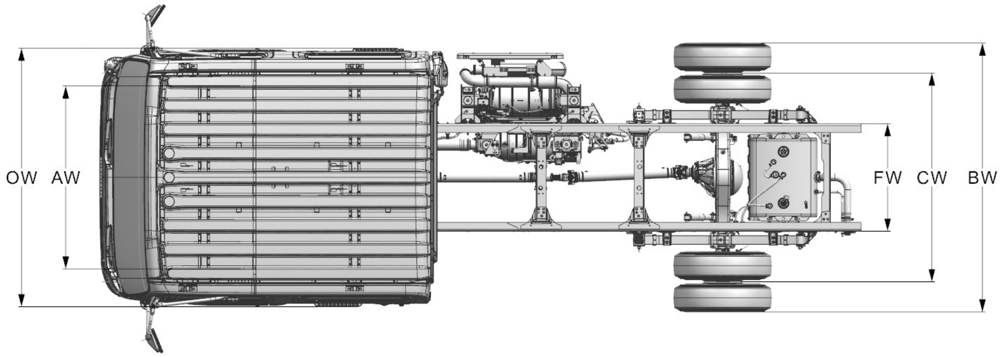


Figure 3

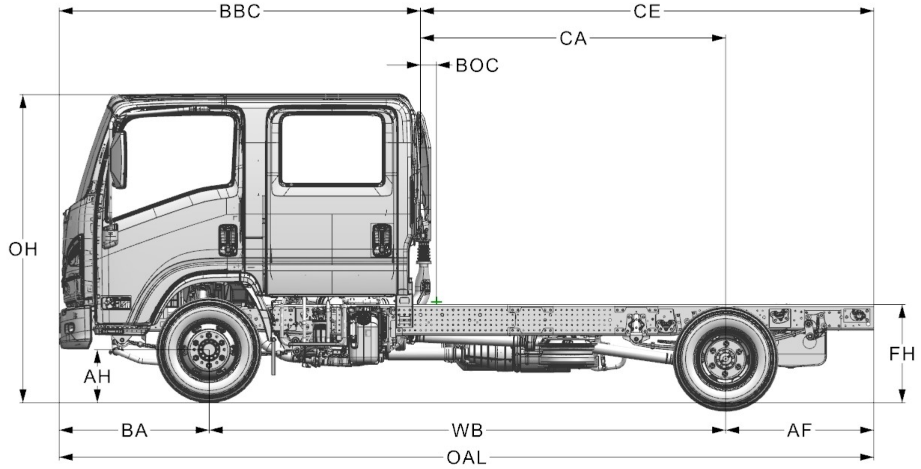


Figure 4

Dimension Constants:

Code	**Inches**	**Code**	**Inches**
AH	7.5	BW	83.3
AW	65.6	CW	65
BA	43.7	FW	33.5
BBC	105.2	OH (16" Tire)	90.5
BOC	5.3	OH (19.5" Tire)	92.4
FH (16" Tire)	31.6	OW	81.3
FH (19.5" Tire)	33.5		

Variable Chassis Dimensions:

Unit	**WB**	**CA***	**CE***	**OAL**	**AF**
inch	150.0	88.5	131.6	236.7	43.1
inch	176.0	114.5	157.6	262.7	43.1

* Effective CA & CE are CA/CE less BOC

Vehicle Weights, Dimensions, and Ratings - Crew Cab

4500 HG:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3G354	150.0	lbs.	4506	2218	6724	7776
3G324	150.0	lbs.	4516	2218	6734	7766
3G454	176.0	lbs.	4610	2165	6775	7725
3G424	176.0	lbs.	4620	2165	6785	7715

5500 XD DERATE*:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3V354	150.0	lbs.	4696	2544	7240	10710
3V324	150.0	lbs.	4706	2544	7250	10700
3V454	176.0	lbs.	4810	2481	7291	10659
3V424	176.0	lbs.	4820	2481	7301	10649

***Note: 5500 HD Derate available through PIO ordering**

4500 XD:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3Z354	150.0	lbs.	4683	2438	7121	8879
3Z324	150.0	lbs.	4693	2438	7131	8869
3Z454	176.0	lbs.	4795	2374	7169	8831
3Z424	176.0	lbs.	4805	2374	7179	8821

5500 XD:

In-Frame Tank Weights and Payload by Model:

Model	WB	Unit	Front	Rear	Total	Payload
3V354	150.0	lbs.	4696	2544	7240	12260
3V324	150.0	lbs.	4706	2544	7250	12250
3V454	176.0	lbs.	4810	2481	7291	12209
3V424	176.0	lbs.	4820	2481	7301	12199

Technical Notes:
Chassis Curb Weight reflects standard equipment and fuel but no driver or payload. Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weight Limits and Option Weights

VEHICLE WEIGHT RATINGS				
Description	4500 HG Capacity (lb.)	4500 XD Capacity (lb.)	5500XD DR Capacity (lb.)	5500 Capacity (lb.)
GVWR Designed Maximum	14,500	16,000	17,950	19,500
GCWR Combined Maximum	20,500	22,000	23,950	25,500
GAWR - Front	5,360	6,630	6,830	7,275
GAWR - Rear	9,880	11,020	12,980	13,660

Options Weights

RPO[1]	Option Description	Front / Rear (lb)
I6B	AGM batteries (825 CCA x 2)	25 / 22
IF4	Air deflector roof mounted (not available in crew cab)	64 / 0
I1V	Audio system with 7" diagonal color touch screen	2 / 0
I2V	Audio system with 7" diagonal color touch screen with backup camera (camera shipped loose)	2 / 2
UZF	Back up alarm	0 / 2
I8T	Chrome grille	1 / 0
I2M	Delete cruise control switch	0 / 0
IY4	Delete standard radio	-3 / 0
IS9	Dual fuel tank - Additional 35 gallon diesel fuel tank mounted on LHS for 150" & 176" wheelbases only [18]	[2]
I79	Engine block heater and oil pan heater with receptacle	4 / 0
I72	Engine block heater with receptacle	2 / 0
IH2	Engine emergency shutdown system HWT, LWL, LOP	0 / 0
IY9	Engine idle shutdown (timer set at 3 minutes for engine shutdown)	0 / 0
I9A	Engine idle shutdown (timer set at 5 minutes for engine shutdown)	0 / 0
IF6	Fire extinguisher and triangle kit mounted in rear organizer	19 / 0
I7F	FMS Jumper Harness	TBD
IZ5	GVWR Derate from 19,500 lbs to 17,950 lbs [21]	0 / 0
I0W	Heated dual remote control mirrors	4 / 0
IS0	Heated mirrors	1 / 0
I8L	High visibility seat belt (orange color, driver and RH passenger, availble on standard cab and front driver and RH passenger seat only crew cab)	0 / 0
I7L	High visibility seat belt (orange color, driver seat only, available on standard cab and front driver seat only of crew cab)	0 / 0
I4K	Keyless entry	3 / 0
I9I	LED Fog Lamps	1 / 0
I8I	LED Tail Light Package	0 / 1
I6K	Lockable DEF fill cap	0 / 0
I5L	Lockable DEF fill cap (all keyed alike on multiple chassis ordered together)	0 / 0
IU2	Mirror bracket for 102’’ wide body	1 / 0
IL9	PTO enable switch and engine idle up switch recommended for PTO and idle applications only	1 / 0
IV9	Seat covers crew cab	6 / 0
I1M	Seat covers for suspension seat standard cab	6 / 0
IV8	Seat covers standard cab	6 / 0
I3Z	Spare keys (2 additional, 4 keys in total)	0 / 0
I1L	Speed limited to 58 MPH	0 / 0
I2L	Speed limited to 65 MPH	0 / 0
I3L	Speed limited to 68 MPH	0 / 0
I4L	Speed limited to 70 MPH	0 / 0
I6T	Suspension seat (not available in crew cab)	18 / 0
I0A	Vertical exhaust - Cross rail horizontal DPF/SCR with vertical exhaust	100 / 100

SEO[1]	Option Description	Front / Rear (lb)
54	Standard model specifications with power windows, power door locks and air conditioning	Standard chassis weight includes these features
24	Advanced Driver Assistance System (ADAS)	22 / 0
55	35 Gallon Aluminum LH Side Fuel Tank	[4]
25	35 Gallon Aluminum LH Side Fuel Tank w/ ADAS	[5]
56	55 Gallon Aluminum LH Side Fuel Tank [3]	149 / 43
26	55 Gallon Aluminum LH Side Fuel Tank w/ ADAS [3]	171 / 43

[1] RPO is Regular Production Option that is stocked in port inventory.
SEO is Special Equipment Option and requires 90-120 day lead time for delivery.

[2] Weights: 150 wb +77 lbs. front and +171 lbs. rear and 176 wb +89 lbs. front and +159 lbs. rear

[3] 176 inch WB std. cab only

[4] Weights: 150 wb +102 lbs. front and -52 lbs. rear and 176 wb +110 lbs. front and -60 lbs. rear

[5] Weights: 150 wb +124 lbs. front and -52 lbs. rear and 176 wb +132 lbs. front and -60 lbs. rear

Frame and Crossmember Specifications - Standard Cab

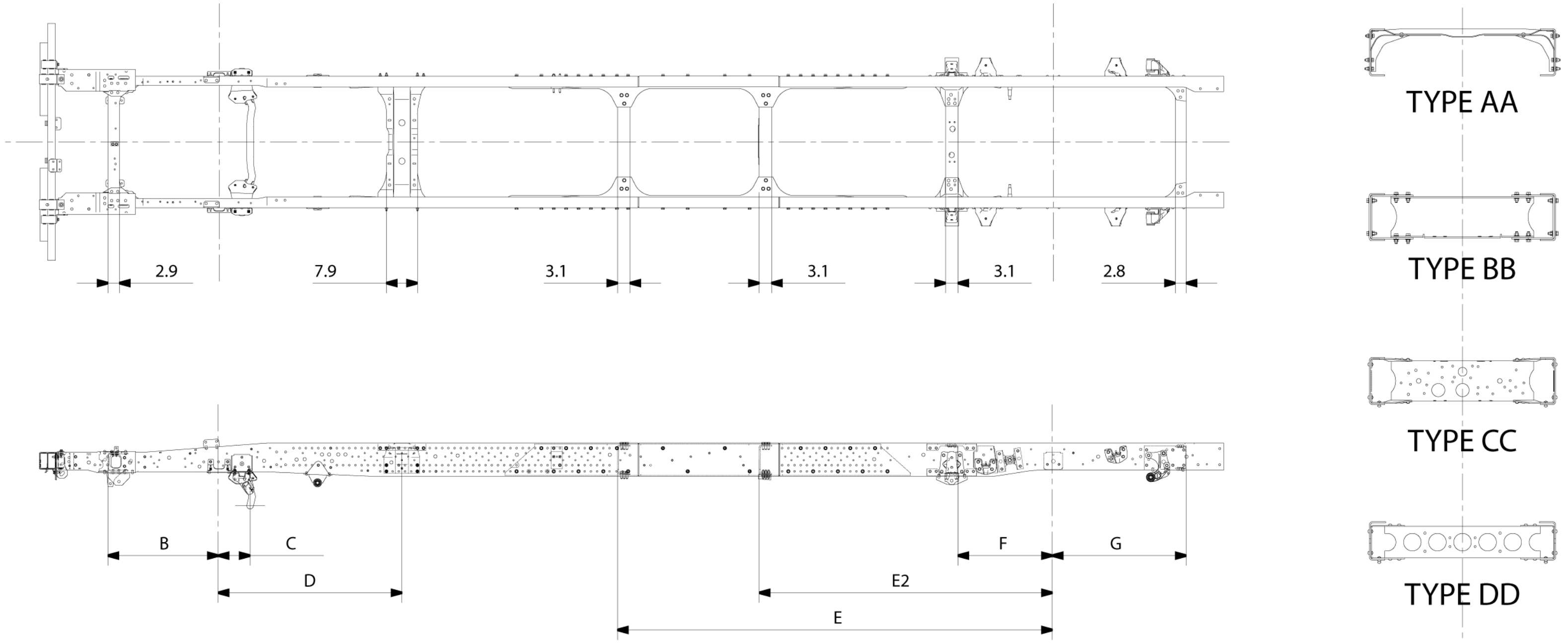


Figure 5

Wheelbase	Frame Thickness	Crossmember Type/Location											
		B	C	D		E		E2		F		G	
109	0.2	28.3	7.9	AA	47.2	-		-		CC	24.2	DD	33.8
132.5	0.2	28.3	7.9	AA	47.2	BB	57.5	-		CC	24.2	DD	33.8
150	0.2	28.3	7.9	AA	47.2	BB	57.9	-		CC	24.2	DD	33.8
176	0.2	28.3	7.9	AA	47.2	BB	74.4	-		CC	24.2	DD	33.8
200[1]	0.2	28.3	7.9	AA	47.2	BB	98.9	BB	74.9	CC	24.2	DD	33.8
212[2]	0.2	28.3	7.9	AA	47.2	BB	110.9	BB	74.9	CC	24.2	DD	33.8

[1] - Only available on 5500 XD DERATE & 5500 XD
[2] - Only available on the 5500 XD

Figure 6

Note: Dimensions in inches

Frame Chart - Standard Cab

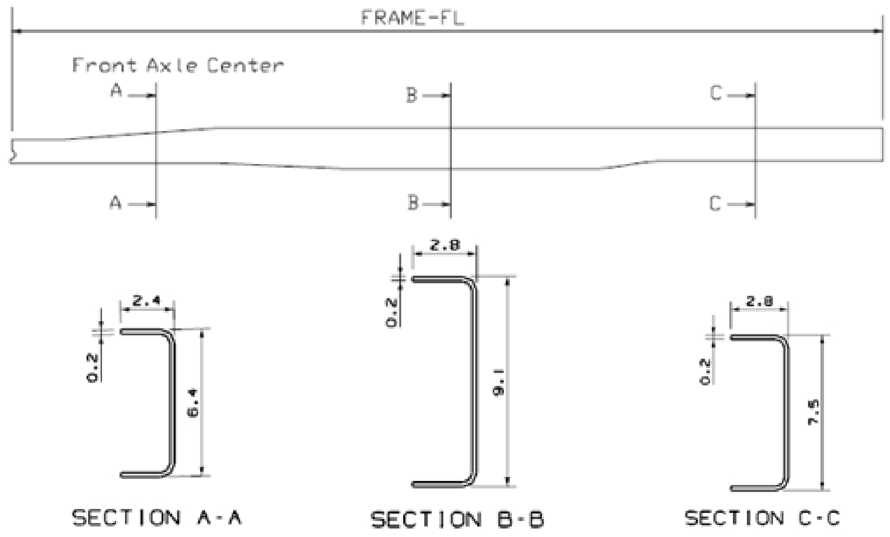

FRAME-FL
Front Axle Center
A
B
C
A
B
C
2.4
0.2
6.4
SECTION A-A
2.8
0.2
9.1
SECTION B-B
2.8
0.2
7.5
SECTION C-C

Figure 7

Wheelbase	Frame FL	Frame Thickness
109.0	182.5	0.2
132.5	206.1	0.2
150.0	223.8	0.2
176.0	249.8	0.2
200.0[1]	273.8	0.2
212.0[2]	285.8	0.2

Figure 8

Note: Dimensions in inches

[1] - Only available on 5500 XD DERATE & 5500 XD

[2] - Only available on the 5500 XD

Frame and Crossmember Specifications - Crew Cab

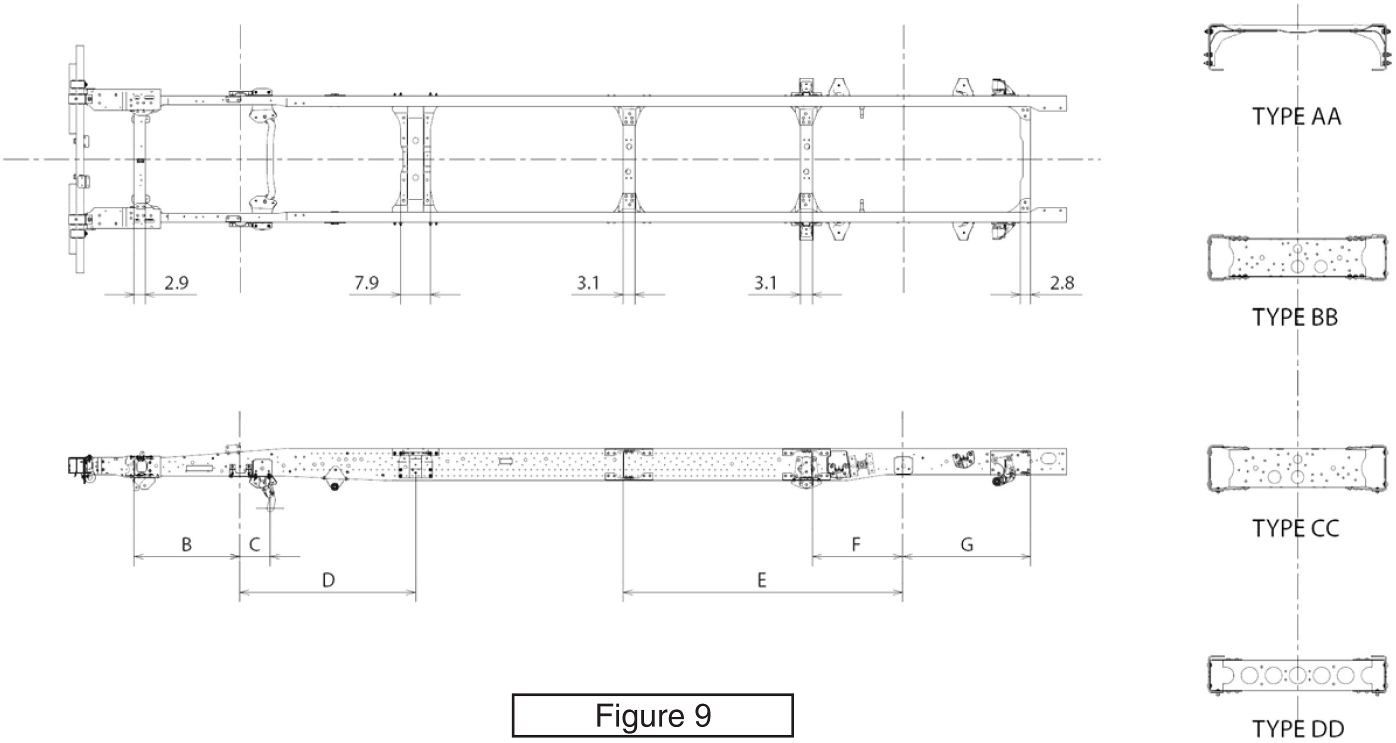

2.9
7.9
3.1
3.1
2.8
B
C
D
E
F
G
TYPE AA
TYPE BB
TYPE CC
TYPE DD

Figure 9

Wheelbase	Frame Thick	Crossmember Type/Location					
		B	C	D	E	F	G
150.0	0.2	28.3	7.9	AA 47.2	BB 57.9	CC 24.2	DD 33.8
176.0	0.2	28.3	7.9	AA 47.2	BB 74.4	CC 24.2	DD 33.8

Figure 10

Note: Dimensions in inches

Frame Chart - Crew Cab

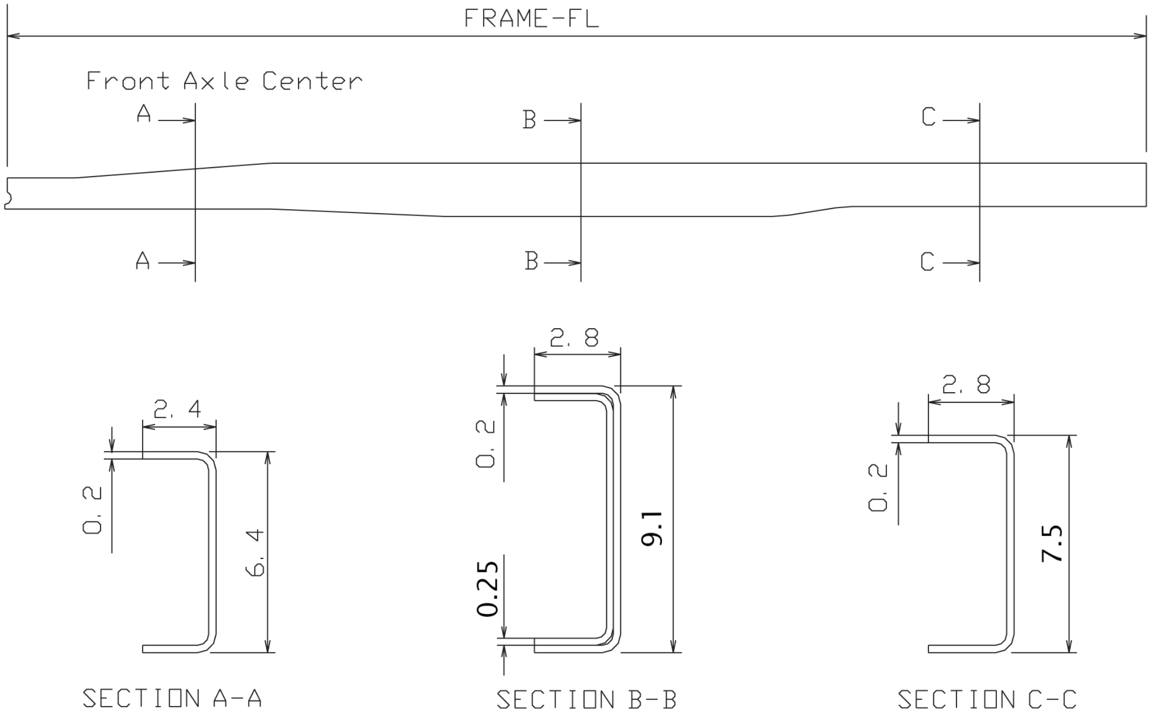

FRAME-FL
Front Axle Center
A
B
C
A
B
C
2.4
0.2
6.4
SECTION A-A
2.8
0.2
0.25
9.1
SECTION B-B
2.8
0.2
7.5
SECTION C-C

Figure 11

Wheelbase	Frame FL	Frame Thickness
150.0	223.8	0.2
176.0	249.8	0.2

Figure 12

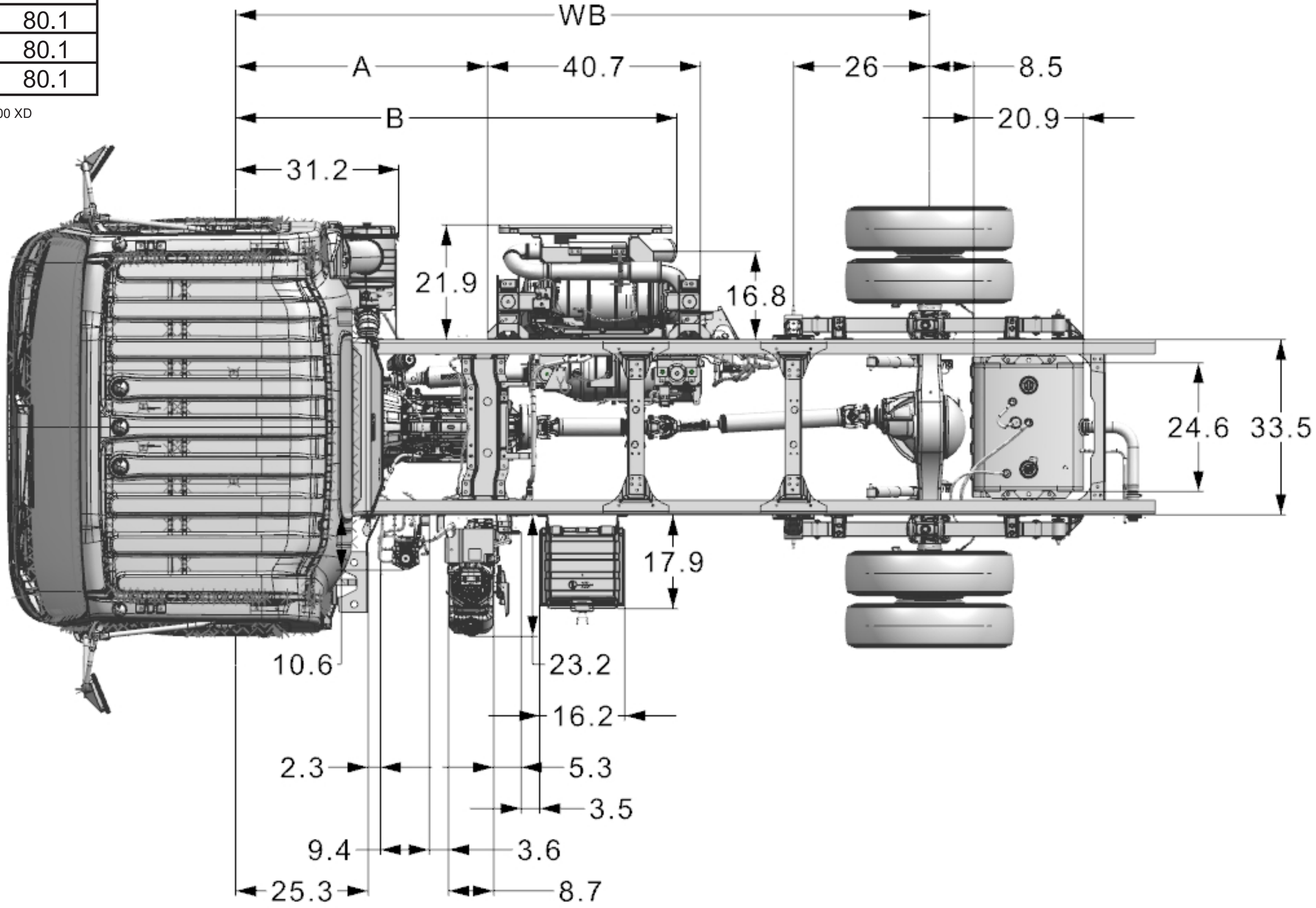
Note: Dimensions in inches

Diesel Standard Cab - Top View

WB	A	B
109	43.4	80.1
132.5	49.7	84.4
150	43.4	80.1
176	43.4	80.1
200[1]	43.4	80.1
212[2]	43.4	80.1

[1] - Only available on 5500 XD & 5500 XD

[2] - Only available on the 5500 XD



WB
A
40.7
26
8.5
B
20.9
31.2
21.9
16.8
24.6
33.5
17.9
10.6
23.2
16.2
2.3
5.3
3.5
9.4
3.6
25.3
8.7

Figure 13

Note: Dimensions in inches

Diesel Standard Cab - Left Side View

WB	A
109	81.6
132.5	87.9
150	81.6
176	81.6
200[1]	81.6
212[2]	81.6

[1] - Only available on 5500 HD DERATE & 5500 XD

[2] - Only available on the 5500 XD

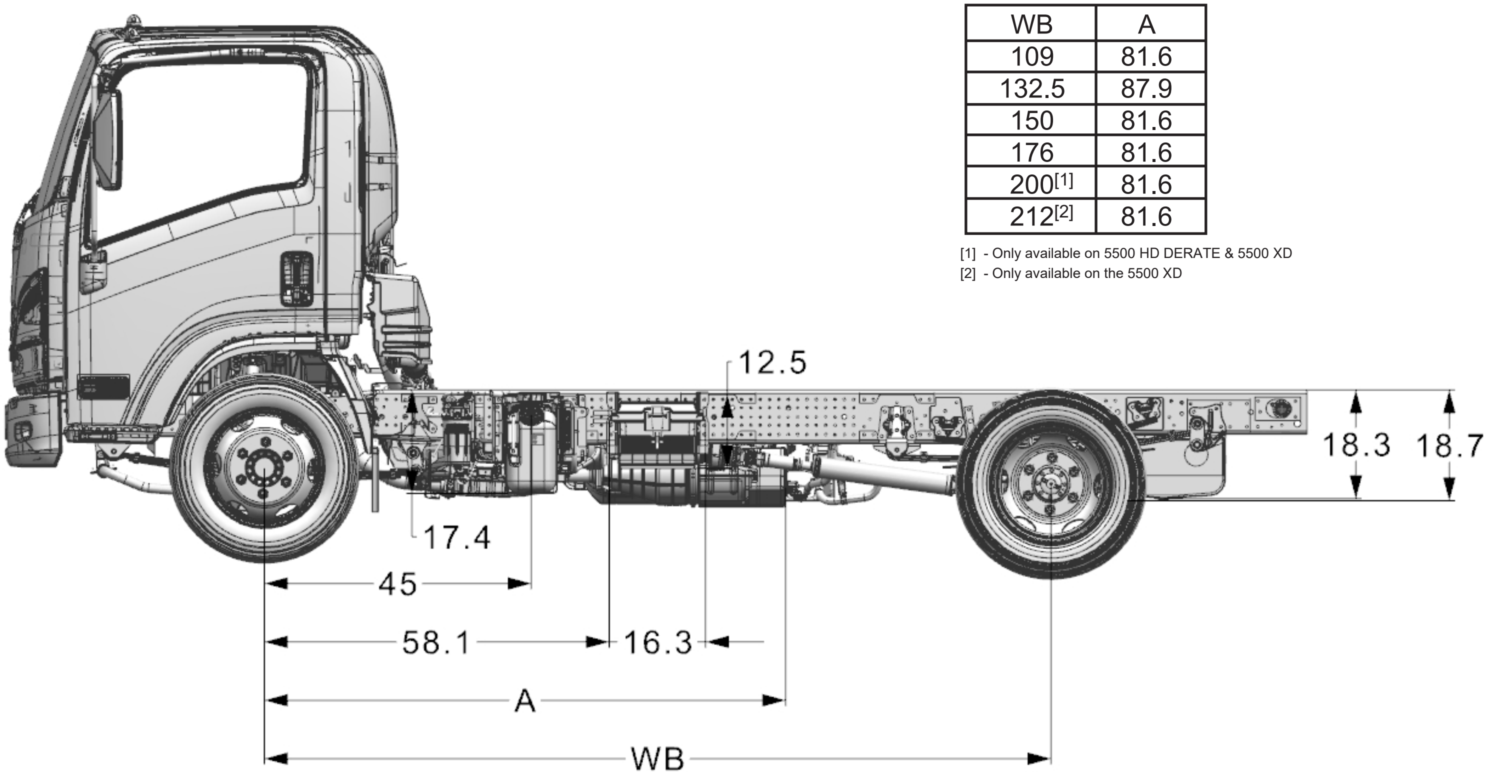

12.5
18.3
18.7
17.4
45
58.1
16.3
A
WB

Figure 14

Note: Dimensions in inches

Diesel Standard Cab - Right Side View

WB	A
109	44.0
132.5	50.3
150	44.0
176	44.0
200[1]	44.0
212[2]	44.0

[1] - Only available on 5500 HD DERATE & 5500 XD

[2] - Only available on the 5500 XG

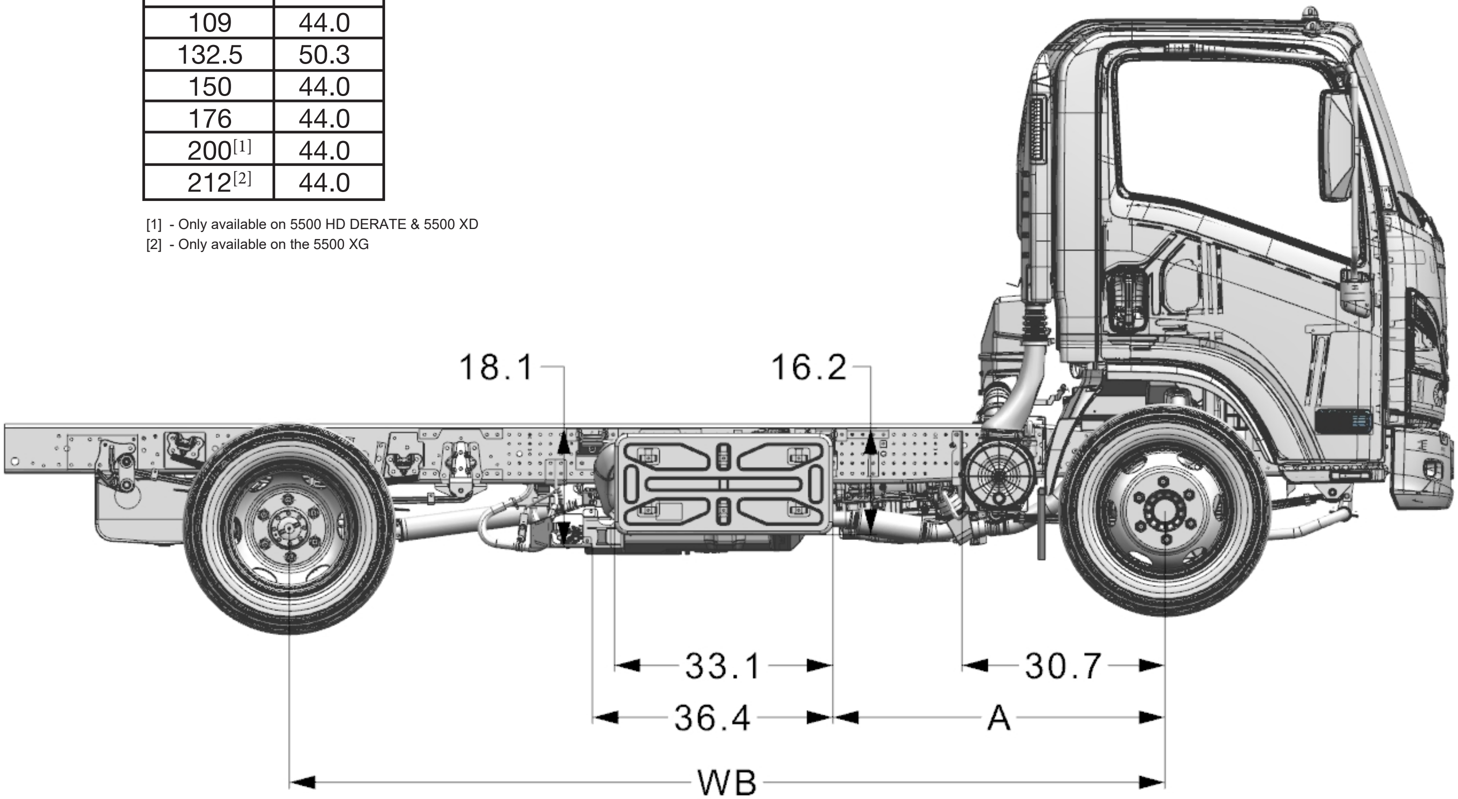
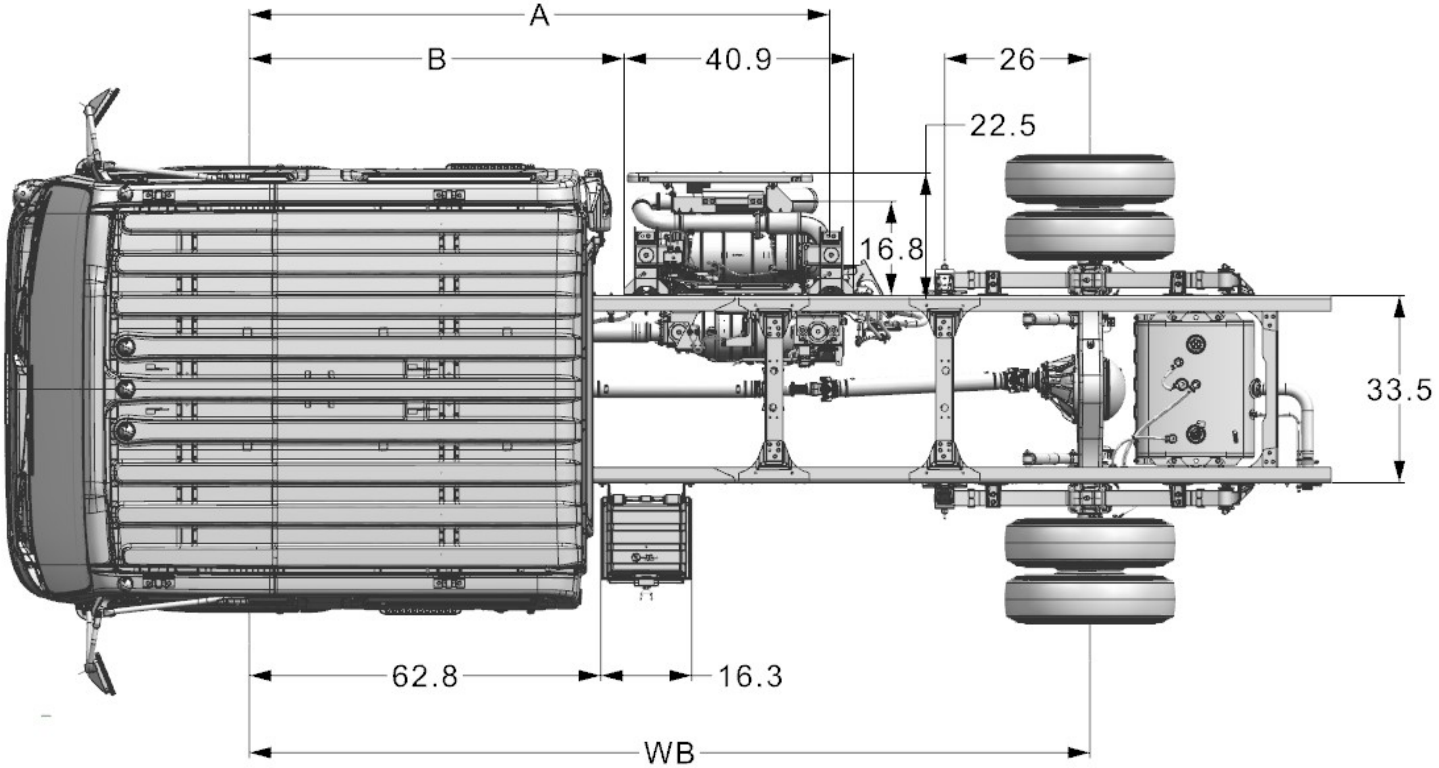


Figure 15

Note: Dimensions in inches

Diesel Crew Cab - Top View

WB	A	B
150	103.7	67.0
176	111.1	76.5



A
B
40.9
26
22.5
16.8
33.5
62.8
16.3
WB

Figure 16

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

Diesel Crew Cab - Left Side View

WB	A
150	104.3
176	113.8

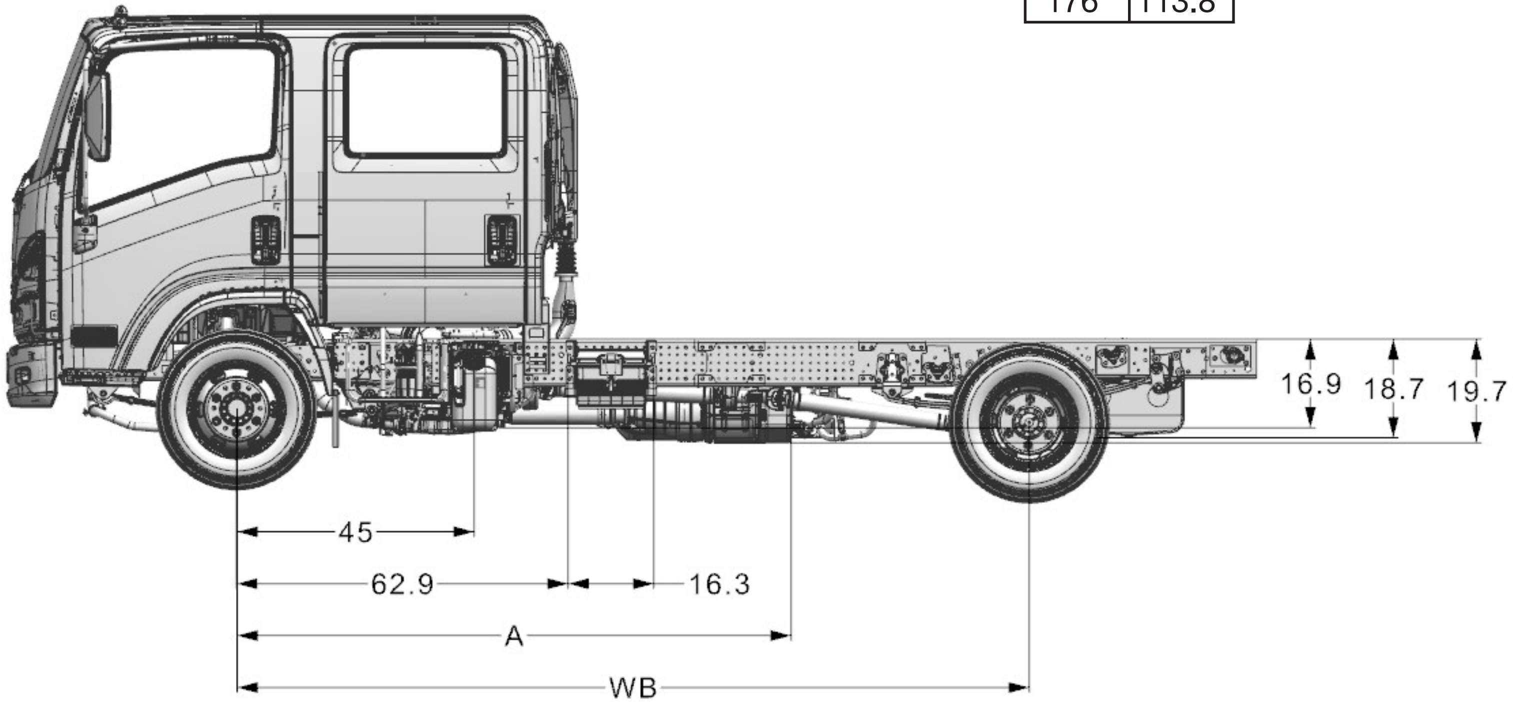
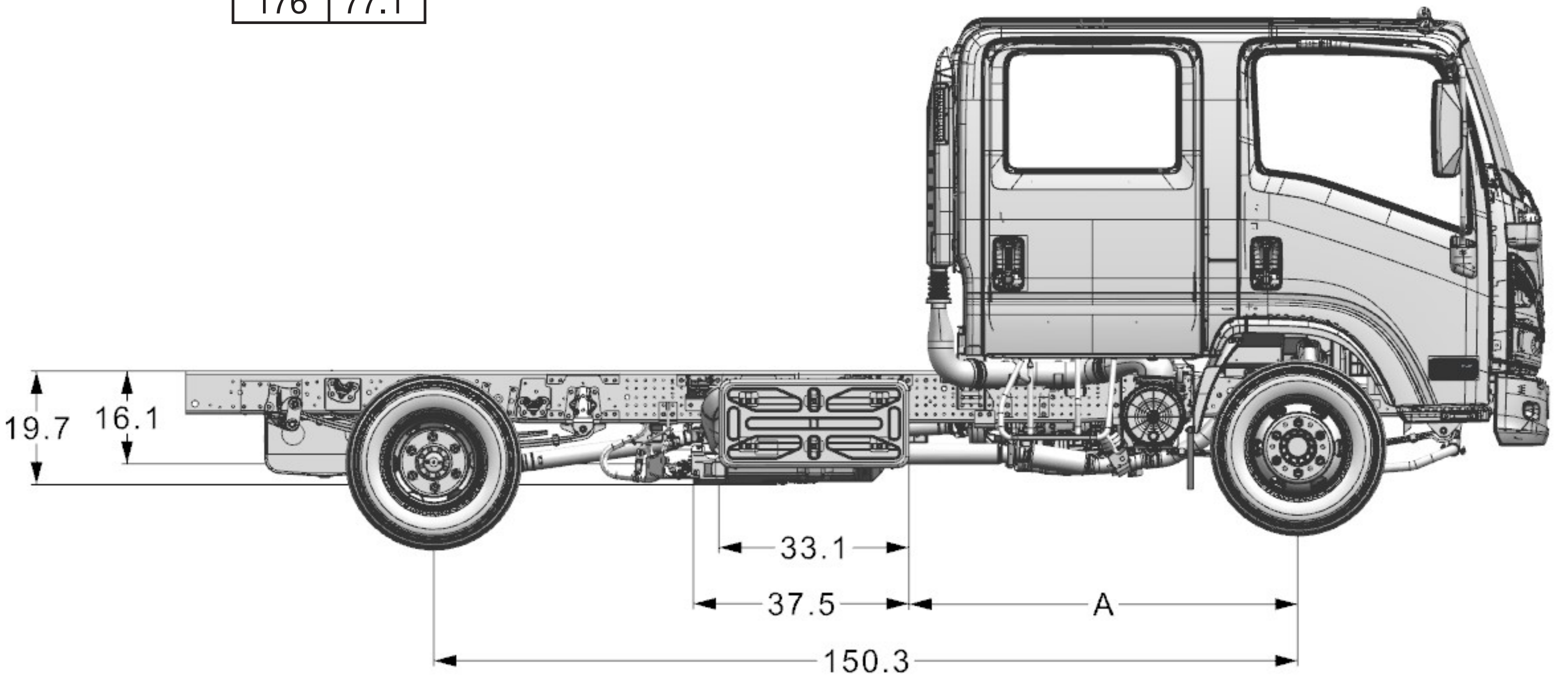

16.9
18.7
19.7
45
62.9
16.3
A
WB

Figure 17

Note: Dimensions in inches

Diesel Crew Cab - Right Side View

WB	A
150	67.6
176	77.1



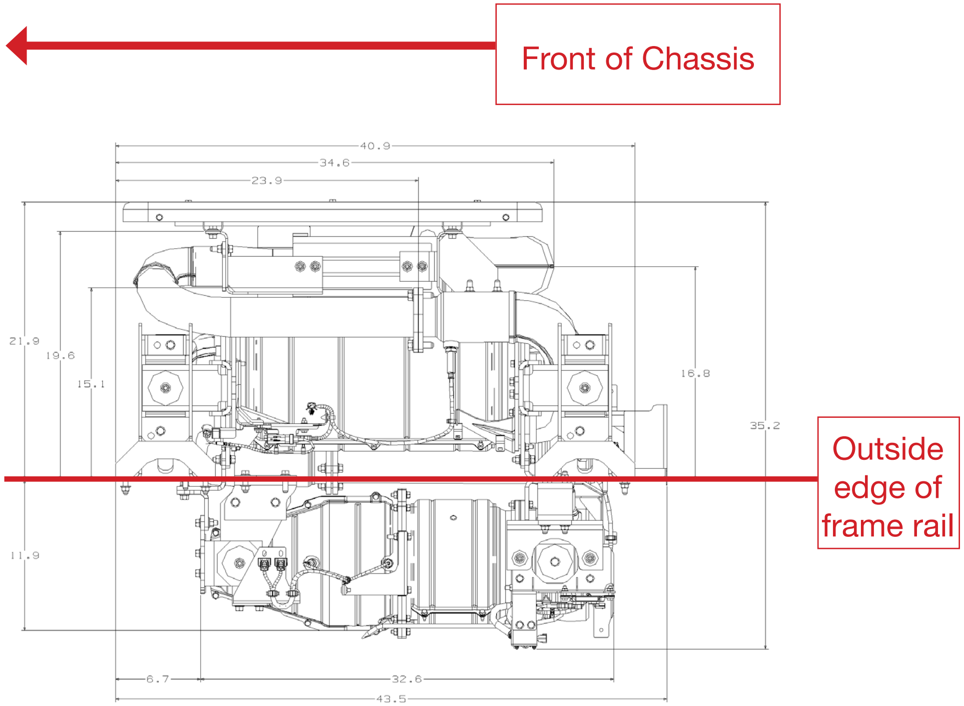
19.7
16.1
33.1
37.5
A
150.3

Figure 18

Note: Dimensions in inches

Exhaust System Dimensions
SCR / DPF 4HK1-TC

View from top of chassis

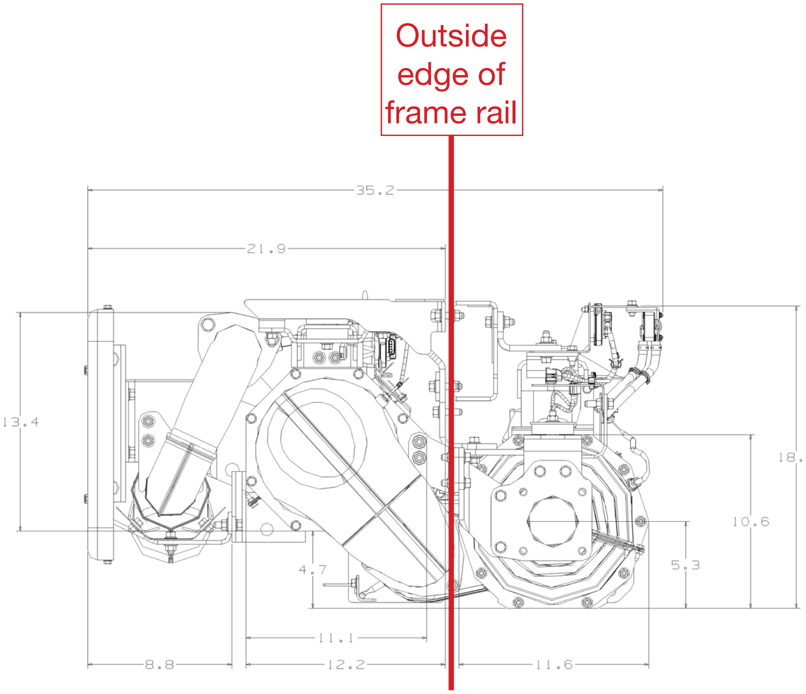

Front of Chassis

Outside edge of frame rail

40.9
34.6
23.9
21.9
19.6
15.1
16.8
35.2
11.9
6.7
32.6
43.5

Figure 19

View from front to rear chassis


Outside edge of frame rail

35.2
21.9
13.4
18.5
10.6
5.3
4.7
11.1
8.8
12.2
11.6

Figure 20

Note: Dimensions in inches

35 Gallon Aluminum Side Mounted Diesel Fuel Tank

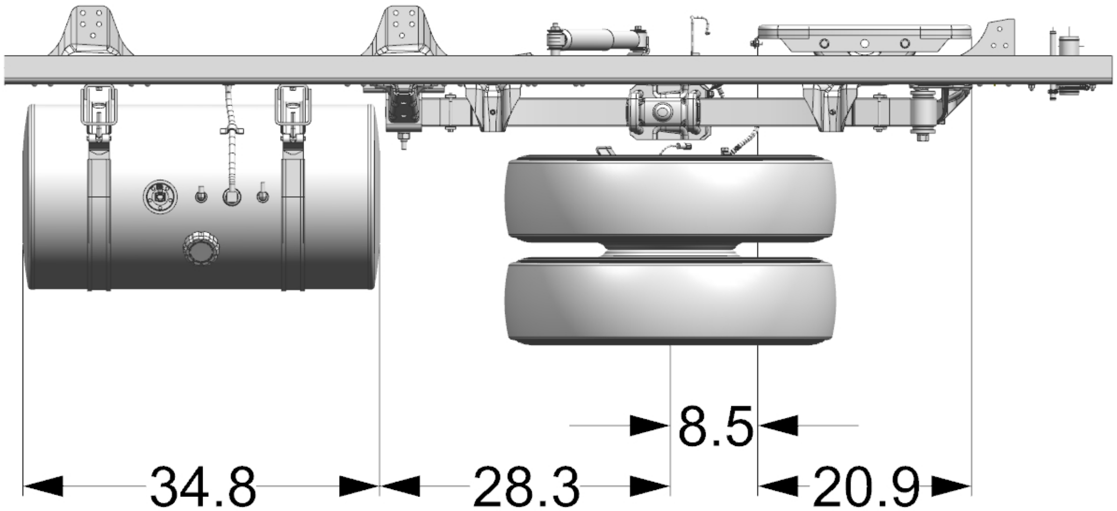

8.5
34.8
28.3
20.9

Figure 21

← Front of chassis

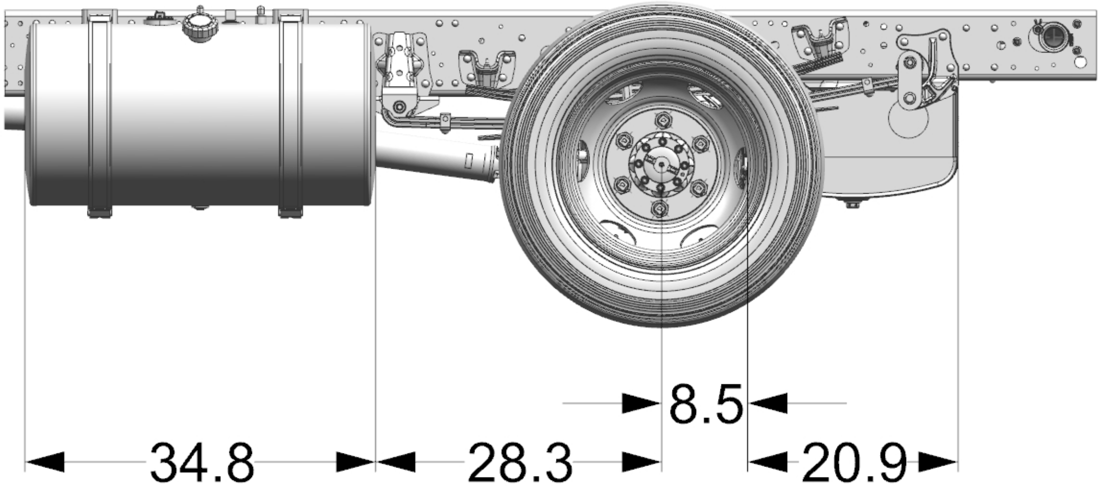

8.5
34.8
28.3
20.9

Figure 22

Note: Dimensions in inches

55 Gallon Aluminum Side Mounted Diesel Fuel Tank

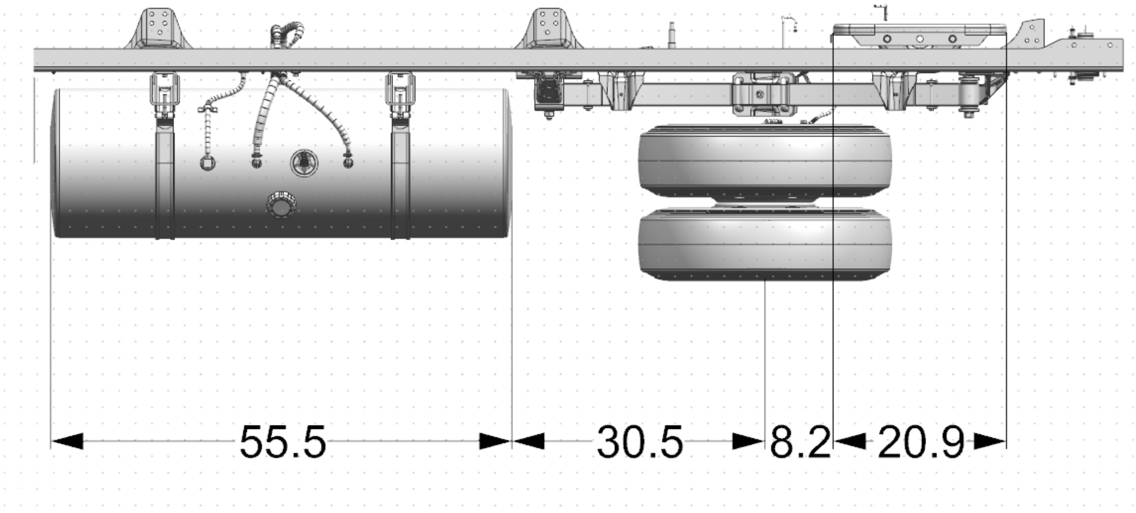

55.5
30.5
8.2
20.9

Figure 23

⟵ Front of chassis

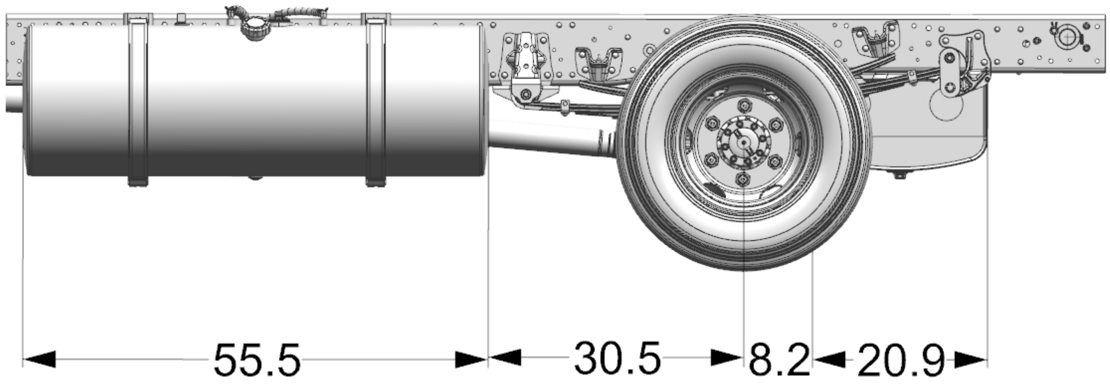

55.5
30.5
8.2
20.9

Figure 24

Note: Dimensions in inches

35 and 55 Gallon Side Mounted Fuel Tank Mounting Location and End View Dimensions

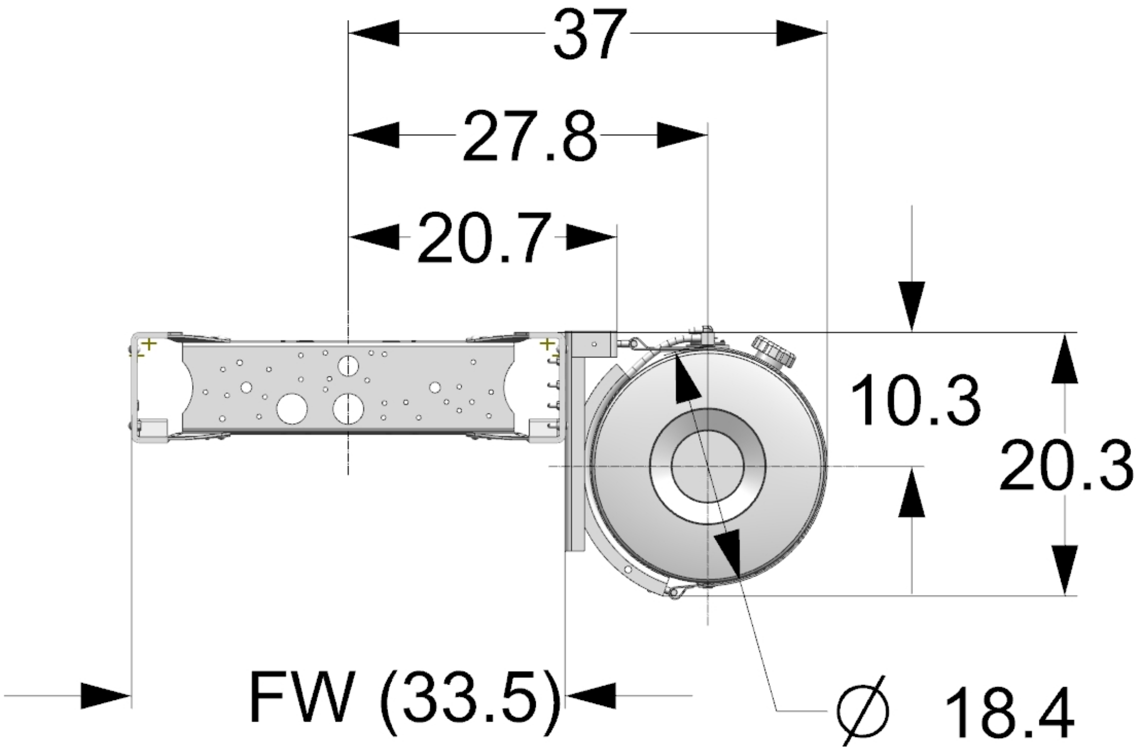

37
27.8
20.7
10.3
20.3
FW (33.5)
∅ 18.4

Figure 25

Note: Dimensions in inches

Cab Tilt Diagram

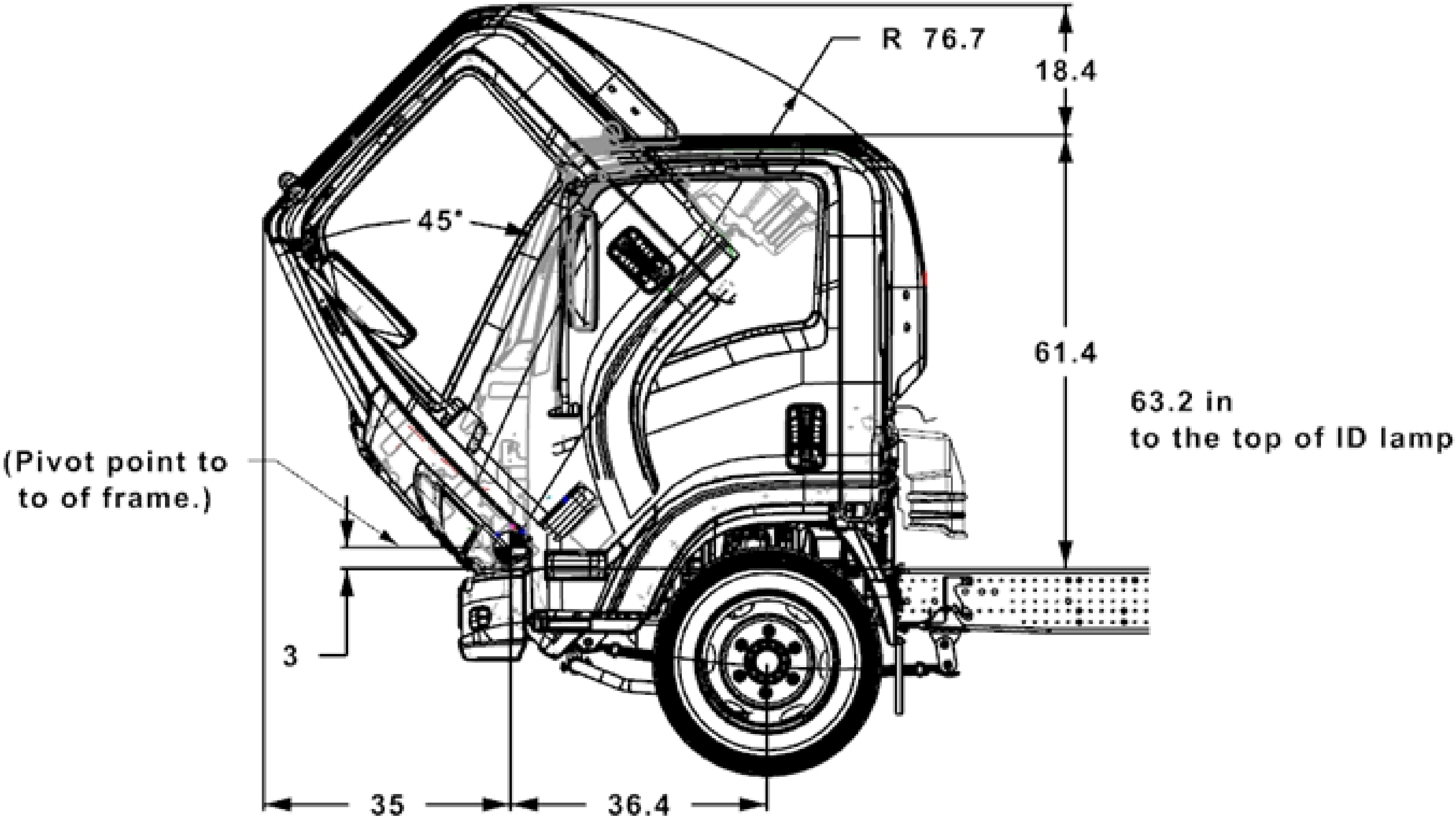

R 76.7
18.4
45°
61.4
63.2 in
to the top of ID lamp
(Pivot point to
to of frame.)
3
35
36.4

Figure 26

Note: Dimensions in inches

Turning Diameter

4500 HG (215/85R-16E Tire):

Turning Diameters (design value)

WB	B (ft) Curb to Curb	C (ft) Wall to Wall
109	31.5	37.1
132.5	38.7	44
150[3]	42.7	48.9
176[3]	51.2	56.4

The 4500 HG Diesel steering features a 49.5 degree inside wheel cut angle

4500 XD, 5500 XD DERATE & 5500 XD (225/70R-19.5F):

Turning Diameters (design value)

WB	B (ft) Curb to Curb	C (ft) Wall to Wall
109	32.8	38.7
132.5	40.0	44.9
150[3]	45.3	50.2
176[3]	52.5	58.1
200[1]	61.0	67.2
212[2]	66.0	73.0

[1] - Only available on 5500 XD DERATE & 5500 XD
[2] - Only available on the 5500 XD
[3] - Applies to both single and crew cab chassis

The 4500 XD, 5500 XD DERATE & 5500 XD Diesel steering features a 46.5 degree inside wheel cut angle

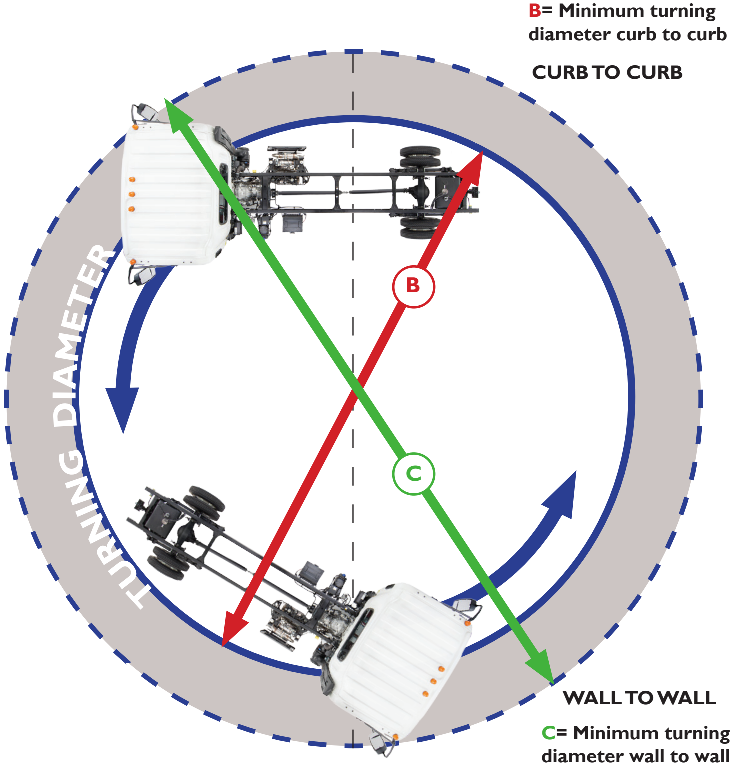

B= Minimum turning diameter curb to curb
CURB TO CURB
TURNING DIAMETER
B
C
WALL TO WALL
C= Minimum turning diameter wall to wall

Figure 27

Center of Gravity - STD CAB

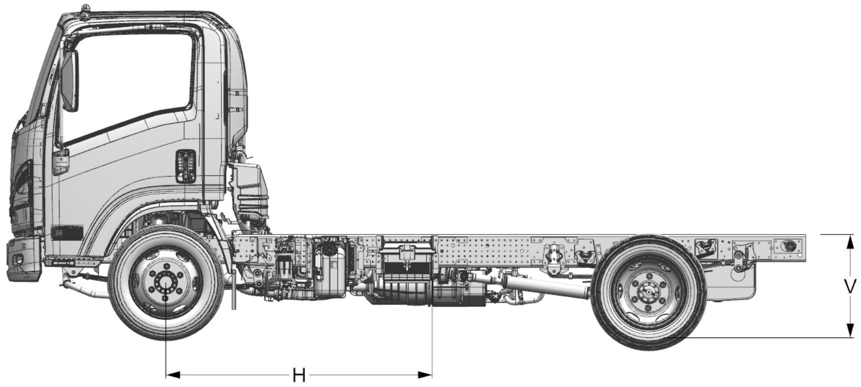


Figure 29

Horizontal and Vertical Center of Gravity of Chassis - STD Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H -	Horizontal CG - H -	Horizontal CG - H -
			In-Frame Fuel Tank	35 gal. Side Fuel Tank	55 gal. Side Fuel Tank
4500 HG	109	22.2	36.6	-	-
	132.5	22.1	43.8	-	-
	150	22	48.5	46.8	-
	176	22	55.7	54.0	50.0

Horizontal and Vertical Center of Gravity of Chassis - STD Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H -	Horizontal CG - H -	Horizontal CG - H -
			In-Frame Fuel Tank	35 gal. Side Fuel Tank	55 gal. Side Fuel Tank
4500 XD	109	23.5	38.2	-	-
	132.5	23.3	45.7	-	-
	150	23.3	50.8	49.2	-
	176	23.3	58.4	56.4	57.9

Horizontal and Vertical Center of Gravity of Chassis - STD Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H -	Horizontal CG - H -	Horizontal CG - H -
			In-Frame Fuel Tank	35 gal. Side Fuel Tank	55 gal. Side Fuel Tank
5500 HD	109	23.5	39.2	-	-
	132.5	23.3	47.0	-	-
	150	23.3	52.2	50.6	-
	176	23.3	60.1	58.1	59.5
	200	23.3	62.0	-	-

Horizontal and Vertical Center of Gravity of Chassis - STD Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H -	Horizontal CG - H -	Horizontal CG - H -
			In-Frame Fuel Tank	35 gal. Side Fuel Tank	55 gal. Side Fuel Tank
5500 XD	109	23.4	39.2	-	-
	132.5	23.3	47.0	-	-
	150	23.4	52.2	50.7	-
	176	23.4	60.1	58.1	59.6
	200	23.4	62.0	-	-
	212	23.2	62.2	-	-

The center of gravity of the completed vehicle with a full load should not exceed 63 inches above ground level at full GVWR, and must be located horizontally between the centerlines of the front and rear axles.

NOTE: The Final Manufacturer must ensure that the combined vertical center of gravity of the chassis, body, and available payload at full GVW does not exceed the maximum vertical center of gravity outlined in the IVD and the Body Builders Manual.

The maximum dimensions for a body installed on the LCF Series chassis are 102 inches wide (outside*) by 91 inches high (inside). If approval is needed for larger body applications, please contact GM Upfitter Integration Team at www.gmupfitter.com

* With 102 inches wide mirror brackets installed in place of standard mirror brackets

Note: Dimensions in inches

Center of Gravity - Crew Cab

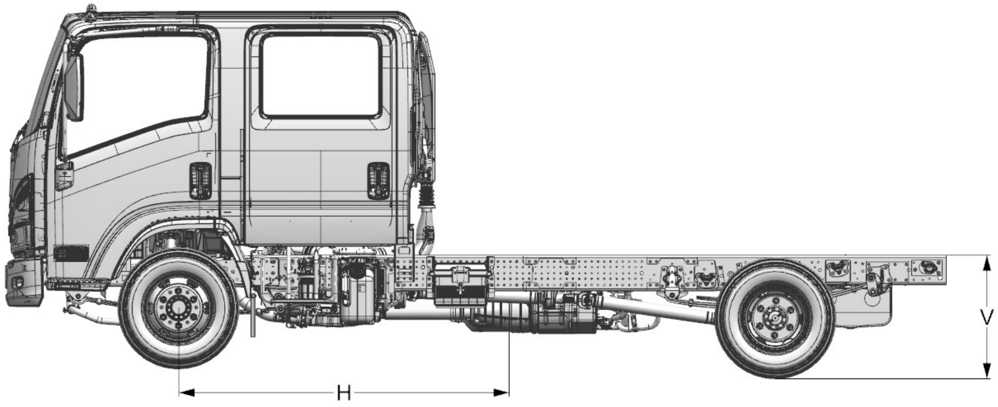


Figure 30

Horizontal and Vertical Center of Gravity of Chassis - Crew Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H - In-Frame Fuel Tank	Horizontal CG - H - 35 gal. Side Fuel Tank	Horizontal CG - H - 55 gal. Side Fuel Tank
4500 HG	150	25.3	49.2	47.7	-
	176	25.2	55.9	53.1	55.5

Horizontal and Vertical Center of Gravity of Chassis - Crew Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H - In-Frame Fuel Tank	Horizontal CG - H - 35 gal. Side Fuel Tank	Horizontal CG - H - 55 gal. Side Fuel Tank
4500 XD	150	25.3	51.2	49.8	-
	176	25.2	58.4	56.5	57.9

Horizontal and Vertical Center of Gravity of Chassis - Crew Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H - In-Frame Fuel Tank	Horizontal CG - H - 35 gal. Side Fuel Tank	Horizontal CG - H - 55 gal. Side Fuel Tank
5500 HD	150	25.3	52.5	51.1	-
	176	25.2	59.9	58.1	59.4

Horizontal and Vertical Center of Gravity of Chassis - Crew Cab

Model	Wheelbase	Vertical CG - V -	Horizontal CG - H - In-Frame Fuel Tank	Horizontal CG - H - 35 gal. Side Fuel Tank	Horizontal CG - H - 55 gal. Side Fuel Tank
5500 XG	150	25.3	52.6	51.1	-
	176	25.2	60.0	58.1	59.5

The center of gravity of the completed vehicle with a full load should not exceed 63 inches above ground level at full GVWR, and must be located horizontally between the centerlines of the front and rear axles.

NOTE: The Final Manufacturer must ensure that the combined vertical center of gravity of the chassis, body, and available payload at full GVW does not exceed the maximum vertical center of gravity outlined in the IVD and the Body Builders Manual.

The maximum dimensions for a body installed on the LCF chassis are 102 inches wide (outside*) by 91 inches high (inside). If approval is needed for larger body applications, please contact GM Upfitter Integration Team at www.gmupfitter.com

Note: Dimensions in inches

* With 102 inches wide mirror brackets installed in place of standard mirror brackets

Front Axle Chart

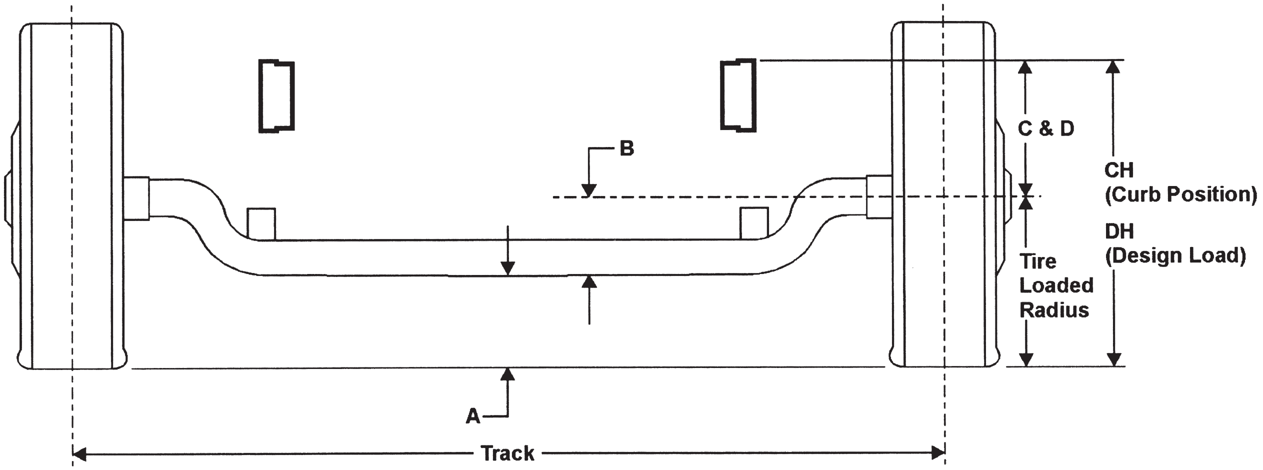


Figure 31

Formulas for calculating height dimensions:

A = Tire Loaded Radius – B
C = Centerline of Axle to Top of Frame Rail at Curb Position
D = Centerline of Axle to Top of Frame Rail at Design Load
CH = C + Tire Unloaded Radius
DH = D + Tire Loaded Radius

Model	Tire	GVWR	GAWR	A	B	C	D	CH	DH	Track	Tire Radius	
											Unloaded	Loaded
4500 HD	215/85 R 16-E	14,500 lbs.	5,360 lbs.	7.5	6.6	12.8	11.7	27.4	25.8	65.5	14.6	14.1
4500 XD	225/70R 19.5F	16,000 lbs.	6,630 lbs.	8.3	6.6	13	11.5	29	26.4	65.5	16	14.93
5500 XD DERATE	225/70R 19.5F	17,950 lbs.	6,830 lbs.	8.3	6.6	12.3	11.5	28.3	26.4	65.5	16	14.91
5500 XD	225/70R 19.5F	19,500 lbs.	7,275 lbs.	8.3	6.6	12.3	11.5	28.3	26.4	65.5	16	14.91

Figure 32

Note: Dimensions in inches

Rear Axle Chart

Definitions	
A	Centerline of axle to bottom of axle bowl.
B	Centerline of axle to top of frame rail at metal---to---metal position.
C	Centerline of axle to top of frame rail at curb position.
D	Centerline of axle to top of frame rail at design load.
E	Rear Tire Clearance: Maximum clearance required for tires and chain measured from top of the frame at the vehicle centerline of the rear axle, when rear wheels on one side ride over a high spot.
CH	Rear Frame Height (Curb Load): Vertical distance between the normal top of frame rail and the ground---line through the centerline of the rear axle at curb position.
DH	Rear Frame Height (Design Load): Vertical distance between the normal top of frame rail and the ground---line through the centerline of the rear axle at design position.
DW	Minimum distance between the inner surfaces of the rear tires.
EW	Minimum Rear Width: Overall width of the vehicle measured at the outermost surfaces of the rear tires.
HH	Rear Tire Clearance: Minimum clearance between the rear axle and the ground---line.
HW	Dual Tire Spacing: Distance between the centerlines of the tires in a set of dual tires.
KH	Tire Bounce Clearance: Minimum distance required for tire bounce as measured from the centerline of the rear axle and the top of the rear tire when one wheel rides over a high spot.
CW	Track Dual Rear Wheel Vehicle: Distance between the centerlines of the dual wheels measured at the ground---line.
KW	Clearance between body and tires.

Equations	
CH	= Tire loaded radius + C
DH	= Tire loaded radius + D
DW	= CW + 2 tire sections –– tire clearance
EW	= CW + 2 tire sections + tire clearance
HH	= Tire loaded radius –– A
JH	= KH –– B
KH	= Tire radius + 3.0 inches
KW	= DW –– 5.0 inches
LW	= 1.0 inch minimum clearance between tires and springs

Values

Model	Tire	GAWR	CW	A	B	C	D	E
4500 HD	215/85R 16-E	9,880 lbs.	65.0	6.5	9.3	15.4	13.0	7.8
4500 XD	225/70R 19.5F	11,020 lbs.	65.7	7.7	9.3	15.3	13.4	8.4
5500 XD DERATE	225/70R 19.5F	12,980 lbs.	65.7	7.7	9.3	15.6	13.4	8.4
5500 XD	225/70R 19.5F	13,660 lbs.	65.7	7.7	9.3	15.6	13.4	8.4

Note: Dimensions in inches

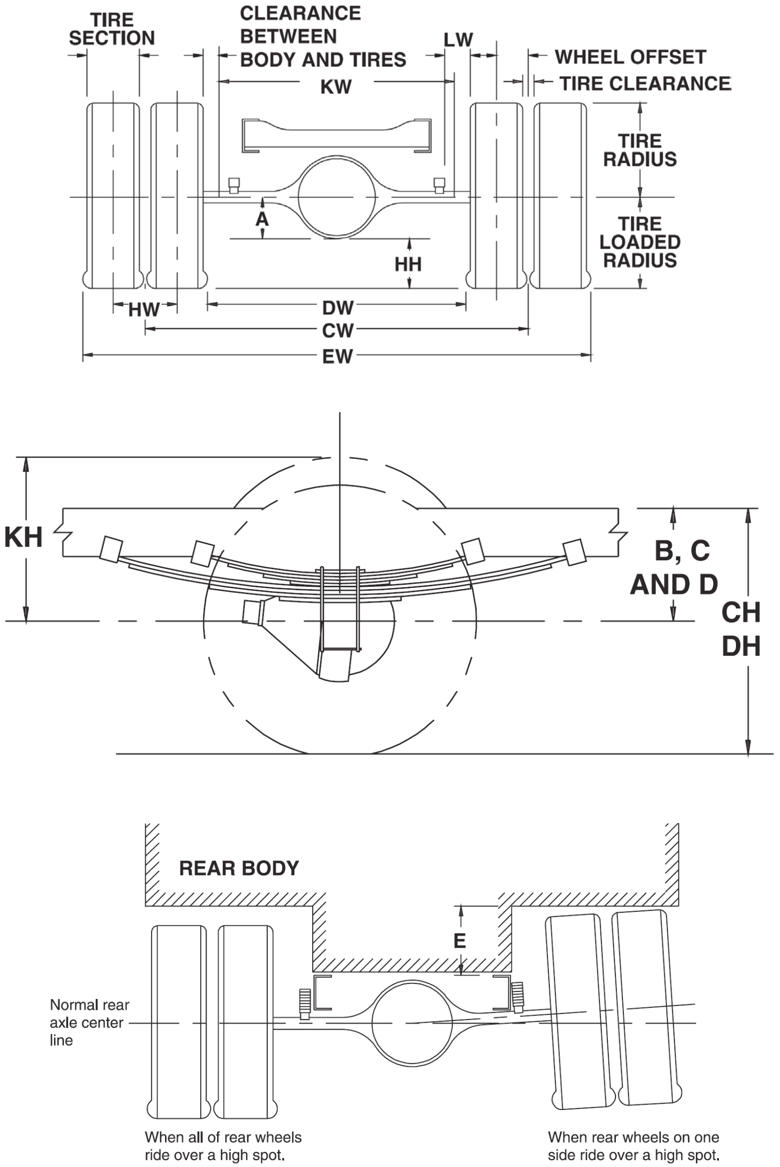

TIRE SECTION
CLEARANCE BETWEEN BODY AND TIRES
LW
WHEEL OFFSET
TIRE CLEARANCE
KW
TIRE RADIUS
A
TIRE LOADED RADIUS
HH
HW
DW
CW
EW
KH
B, C AND D
CH
DH
REAR BODY
E
Normal rear axle center line
When all of rear wheels ride over a high spot.
When rear wheels on one side ride over a high spot.

Figure 33

Suspension Deflection Charts

4500 HD

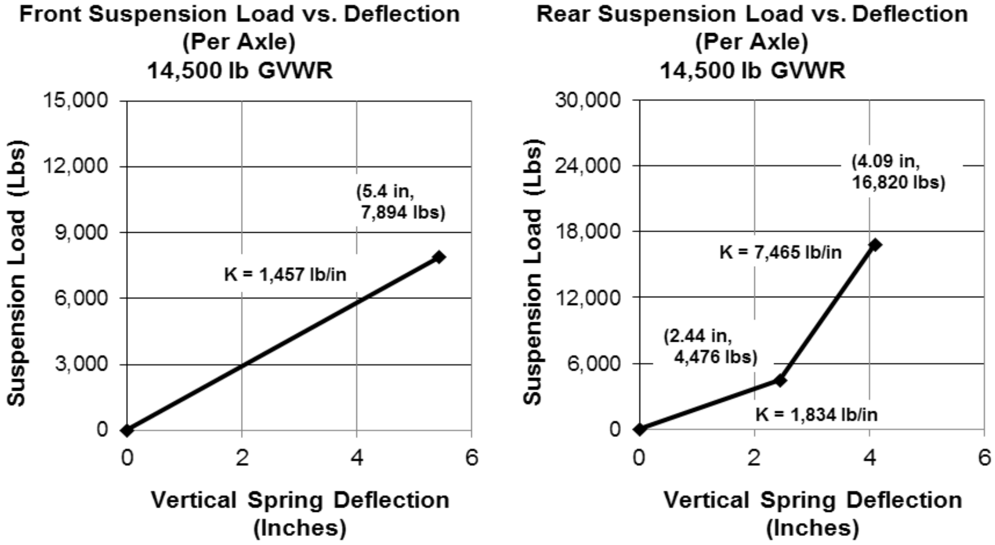


Figure 34

4500 XD

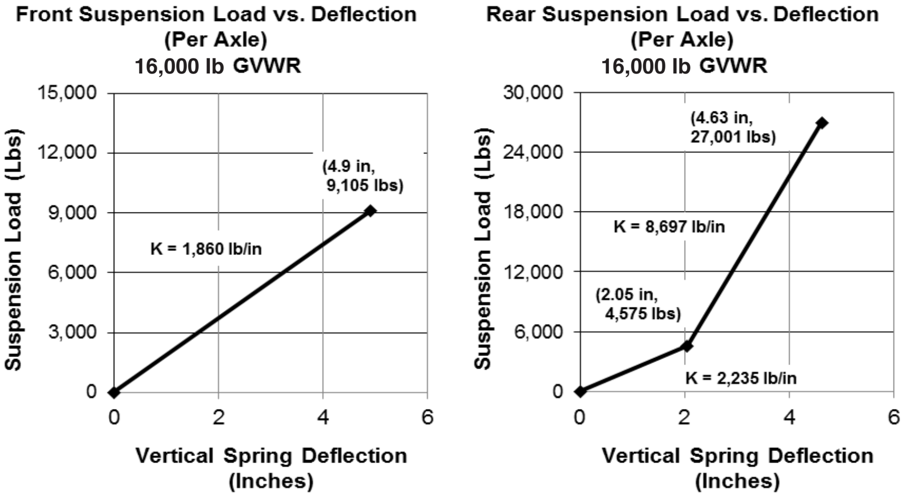
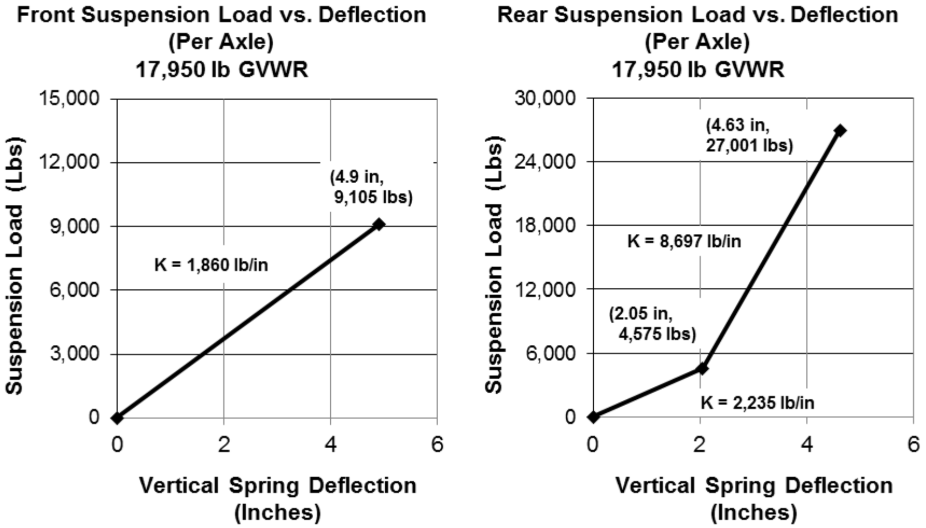


Figure 35

Suspension Deflection Charts

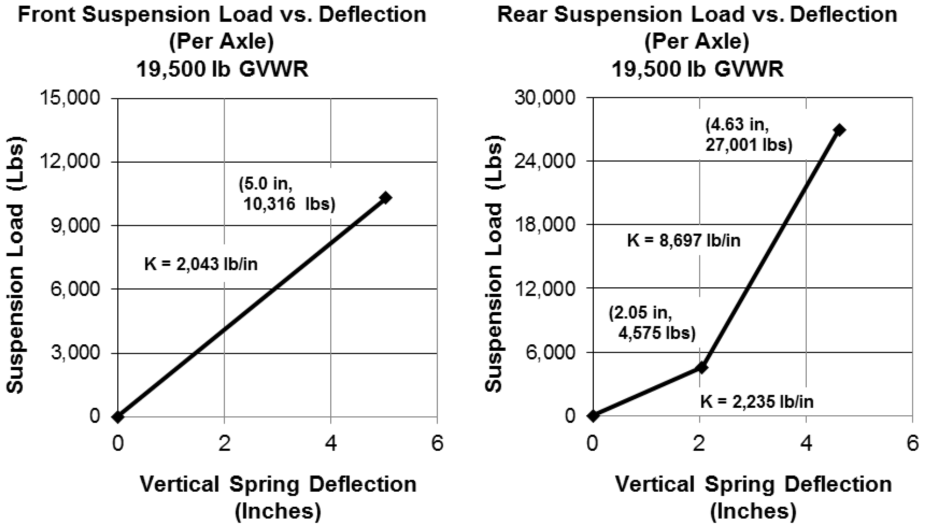
5500 XD DERATE


Front Suspension Load vs. Deflection (Per Axle) 17,950 lb GVWR

Rear Suspension Load vs. Deflection (Per Axle) 17,950 lb GVWR

Figure 36

5500 XD


Front Suspension Load vs. Deflection (Per Axle) 19,500 lb GVWR

Rear Suspension Load vs. Deflection (Per Axle) 19,500 lb GVWR

Figure 37

Tire and Disc Wheel Chart

Tire

Model	Tire Size	GVWR (lbs.)	Tire Load Limit and Cold Inflation Pressures				Maximum Tire Load Limits (lbs.)	
			Single		Dual		Front	Rear
			LBS.	PSI	LBS.	PSI	2 Single	4 Dual
4500 HD	215/85R-16E	14,500	2,680	80	2,470	80	5,360	9,880
4500 XD	225/70R-19.5F	16,000	3,315	85	3,115	85	6,630	12,460
5500 XD DERATE	225/70R-19.5F	17,950	3,640	95	3,415	95	7,280	13,660
5500 XD	225/70R-19.5F	19,500	3,640	95	3,415	95	7,280	13,660

Figure 38

Model	Tire Size	GVWR (lbs.)	Tire Radius				Tire Section Width	Tire Clearance	Design Rim Width
			Loaded		Unloaded				
			Front	Rear	Front	Rear			
4500 HD	215/85R-16E	14,500	14.1	14.1	14.6	14.6	8.2	1.8	6.0
4500 XD	225/70R-19.5F	16,000	14.93	14.98	16	16	8.7	1.3	6.0
5500 XD DERATE	225/70R-19.5F	17,950	14.91	14.96	16	16	8.7	1.3	6.0
5500 XD	225/70R-19.5F	19,500	14.91	14.96	16	16	8.7	1.3	6.0

Figure 39

Disc Wheel

Wheel Size	Bolt Holes	Bolt Circle Dia.	Ft./Rr. Nut Size*	Rear Stud Size*	Nut/Stud Torque Specs.	Inner Circle	Outside Offset	Disc Thickness	Rim Type	Material Mfg.
16 x 6 K	6 JIS	8.75	1.6142 (41 mm) BUD HEX	0.8268 (21 mm) SQUARE	325 ft-lb. (440 N•M)	6.46	5.0	0.37	5° DC	Steel TOPY
19.5 x 6.00 K	6 JIS	8.75	1.6142 (41 mm) BUD HEX	0.8268 (21 mm) SQUARE	325 ft-lb. (440 N•M)	6.46	5.0	0.35	15° DC	Steel TOPY

*O.D. Wrench Sizes

Figure 40

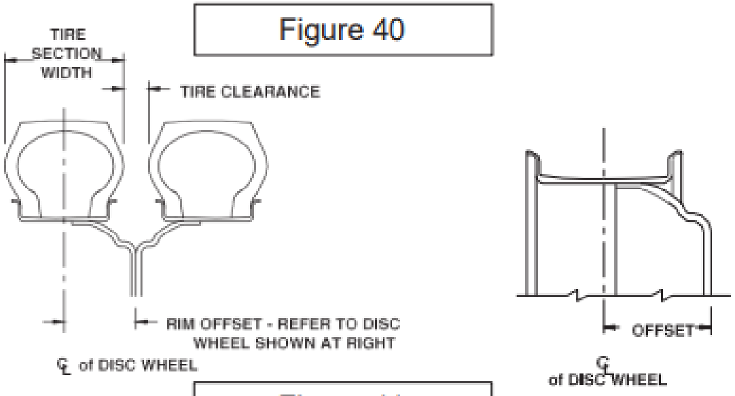
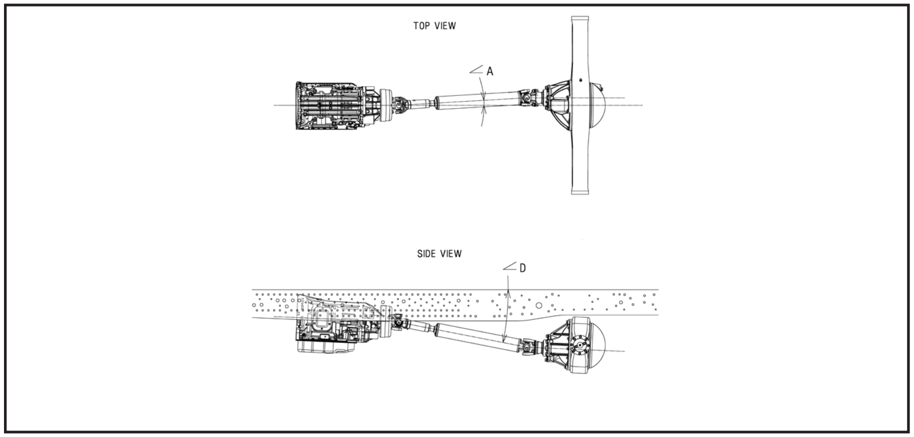


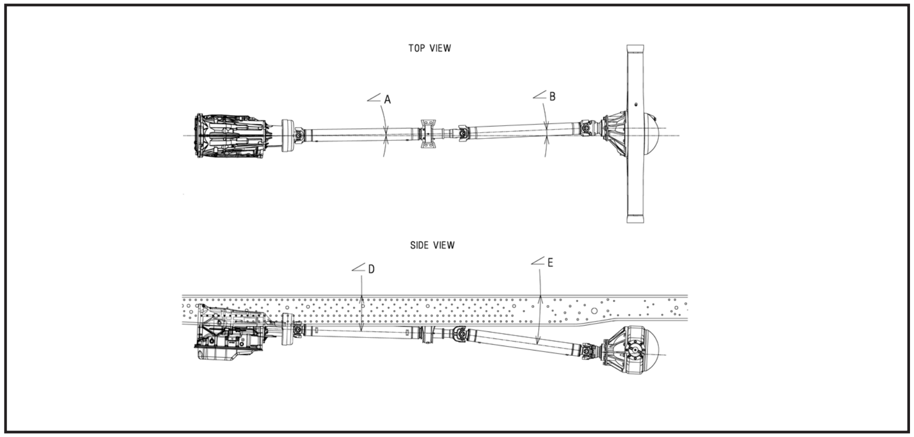
Figure 41

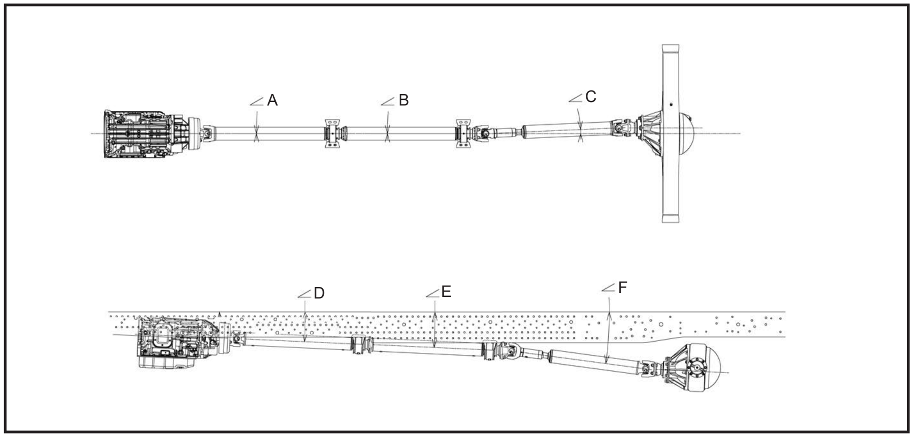
Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

Propeller Shaft - 4500 HG







Wheelbase (in.)	Top View			Side View				
	∠A	∠B	∠C	∠D	∠E	∠F	Trans.	Rear Axle
109	2.5º	-	-	9.4º	-	-	2.5º	2.5º
132.5	0º	2..7º	-	5.3º	6.0º	-	2.5º	2.5º
150	0º	2.7º	-	2.6º	6.6º	-	2.5º	2.5º
176	0º	1.8º	-	2.1º	4.3º	-	2.5º	2.5º

Figure 42

Note: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard fuel but no driver, body, or payload.

Propeller Shaft Continued - 4500 HG

Wheelbase	109	132.5	150	176
No. of Shafts	1	2	2	2
Shaft #1 O.D.	3.25”	3.25”	3.25”	3.25”
Thickness	0.0906”	0.0906”	0.0906”	0.0906”
Length	36.57”	16.97”	34.29”	43.47”
Type	A	B	B	B
Shaft #2 O.D.	N/A	3.25”	3.25”	3.25”
Thickness	N/A	0.0906”	0.0906”	0.0906”
Length	N/A	33.62”	34.03”	50.47”
Type	N/A	C	C	C

Figure 43

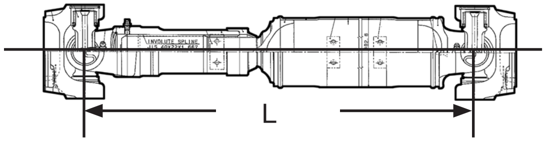
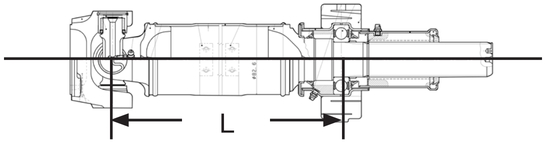
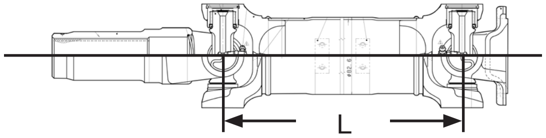
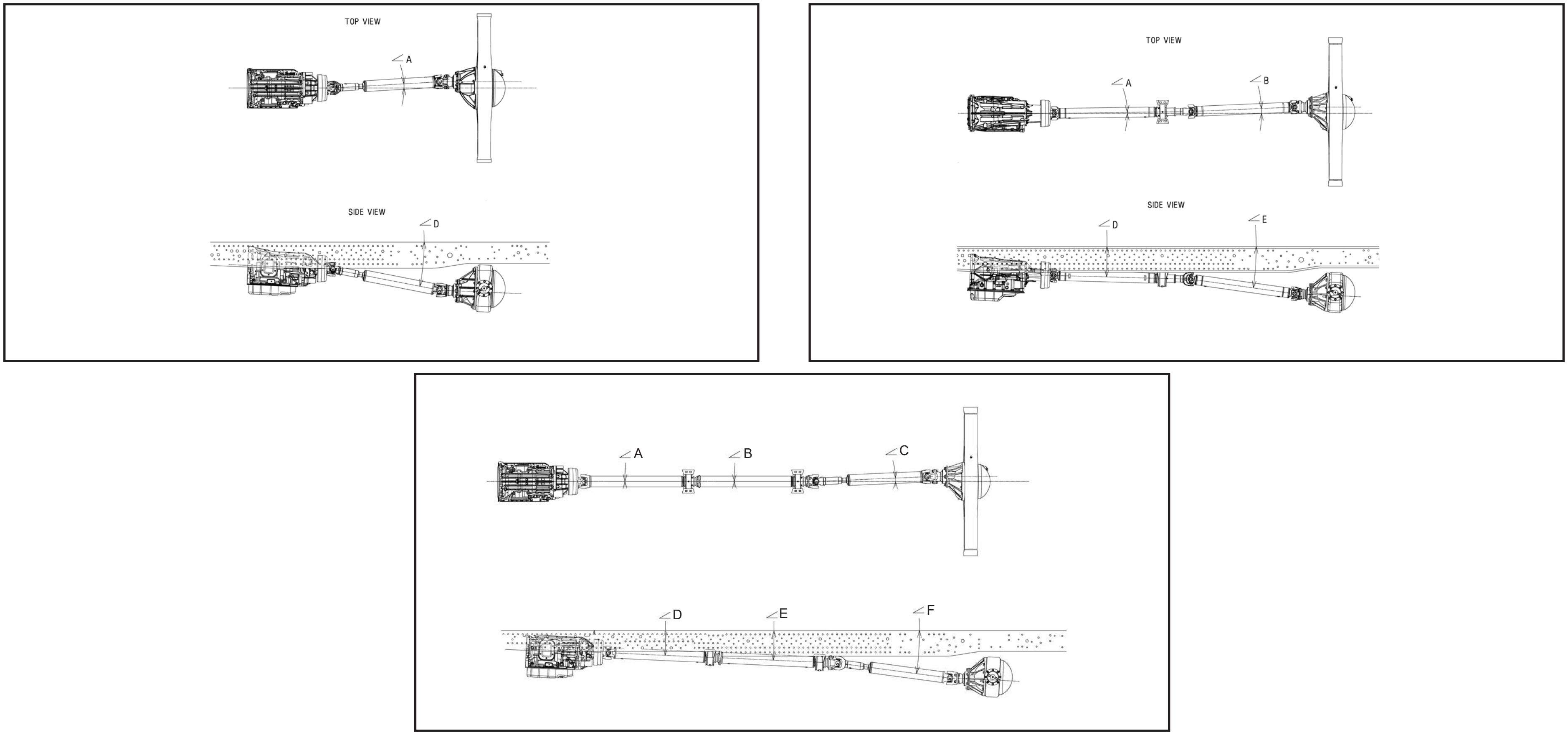
Type	Description	Illustration
Type **A**	1st shaft in 1-piece driveline	
Type **B**	1st shaft in 2-piece driveline	
Type **C**	2nd shaft in 2-piece driveline	

Figure 44

Note: Dimensions in inches

Propeller Shaft - 4500 XD



Wheelbase (in.)	Top View			Side View				
	∠A	∠B	∠C	∠D	∠E	∠F	Trans.	Rear Axle
109	2.5º	-	-	9.5º	-	-	2.5º	2.5º
132.5	0º	2..7º	-	5.3º	6.2º	-	2.5º	2.5º
150	0º	2.7º	-	2.6º	6.8º	-	2.5º	2.5º
176	0º	1.8º	-	2.1º	4.5º	-	2.5º	2.5º

Figure 42

Note: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard fuel but no driver, body, or payload.

Propeller Shaft Continued - 4500 XD

Wheelbase	**109**	**132.5**	**150**	**176**
No. of Shafts	1	2	2	2
Shaft #1 O.D.	3.25”	3.25”	3.25”	3.25”
Thickness	0.0906”	0.0906”	0.0906”	0.0906”
Length	36.6”	16.97”	34.29”	43.74”
Type	A	B	B	B
Shaft #2 O.D.	N/A	3.25”	3.25”	3.25”
Thickness	N/A	0.0906”	0.0906”	0.0906”
Length	N/A	33.65”	34.05”	50.50”
Type	N/A	C	C	C

Figure 43

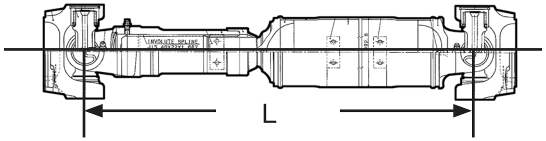
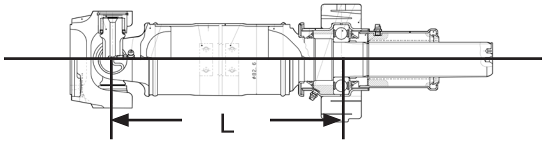
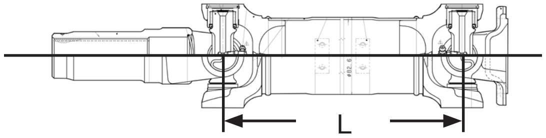
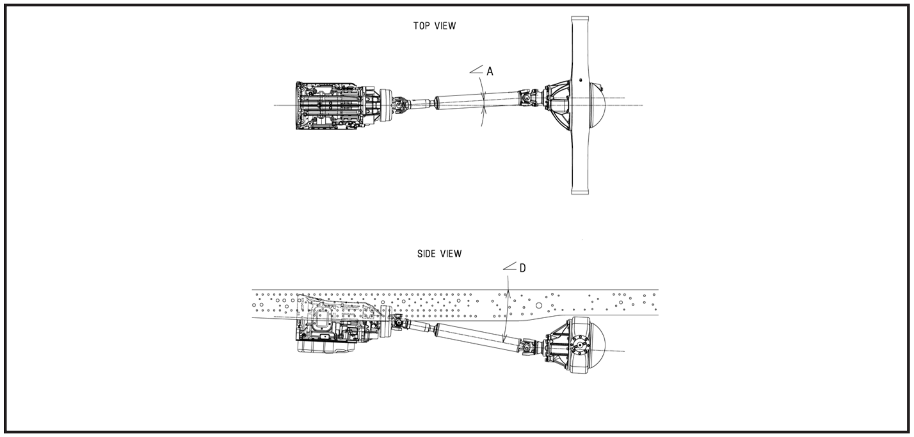
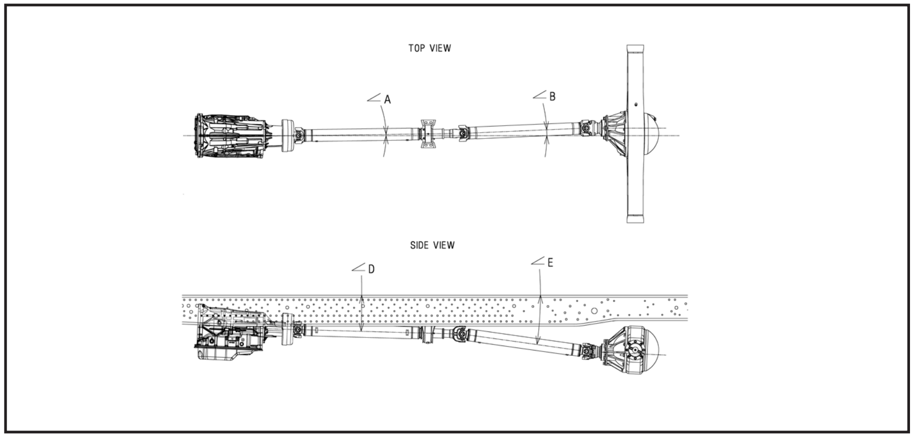
Type	**Description**	**Illustration**
Type **A**	1st shaft in 1-piece driveline	
Type **B**	1st shaft in 2-piece driveline	
Type **C**	2nd shaft in 2-piece driveline	

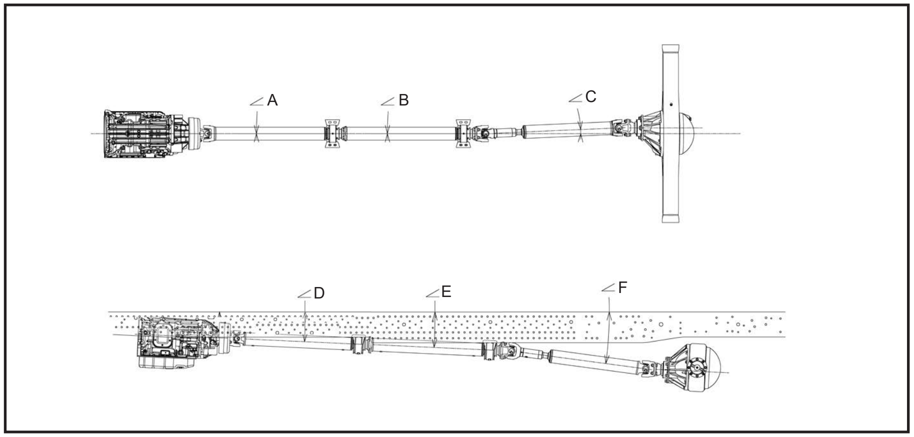
Figure 44

Note: Dimensions in inches

Propeller Shaft - 5500 HD / 5500 XD







Wheelbase (in.)	Top View			Side View				
	∠A	∠B	∠C	∠D	∠E	∠F	Trans.	Rear Axle
109	3.4º	-	-	11.1º	-	-	2.5º	2.5º
132.5	0º	3.3º	-	5.3º	7.3º	-	2.5º	2.5º
150	0º	3.2º	-	2.6º	7.6º	-	2.5º	2.5º
176	0º	2.2º	-	2.1º	5.1º	-	2.5º	2.5º
200[1]	0º	0º	2.2º	2.3º	3.3º	3.4º	2.5º	2.5º
212[2]	0º	0º	2.2º	2.3º	2.1º	3.1º	2.5º	2.5º

[1] - Only available on 55500 HD DERATE & 5500 XG

[2] - Only available on the 5500 XG

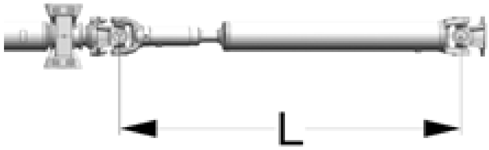
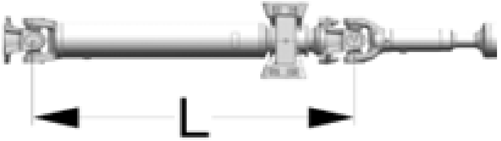
Figure 42

Note: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard fuel but no driver, body, or payload.

Propeller Shaft Continued - 5500 HD / 5500 XD

Wheelbase	109	132.5	150	176	200[1]	212[2]
No. of Shafts	1	2	2	2	3	3
Shaft #1 O.D.	3.54	3.54	3.54	3.54	3.54	3.54
Thickness	0.091	0.126	0.091	0.126	0.126	0.126
Length	35.65	22.91	40.24	49.69	49.69	49.69
Type	A	B	B	B	B	B
Shaft #2 O.D.	N/A	3.54	3.54	3.54	3.54	3.54
Thickness	N/A	0.126	0.091	0.126	0.126	0.126
Length	N/A	36.09	36.46	52.86	23.90	35.71
Type	N/A	A	A	A	B	B
Shaft #3 O.D.	N/A	N/A	N/A	N/A	3.54	3.54
Thickness	N/A	N/A	N/A	N/A	0.126	0.126
Length	N/A	N/A	N/A	N/A	52.72	52.91
Type	N/A	N/A	N/A	N/A	A	A

Figure 43

Type	Description	Illustration
Type **A**	1st shaft in 1 piece driveline 2nd shaft in 2 piece driveline 3rd shaft in 3 piece driveline	
Type **B**	1st shaft in 2 or 3 piece driveline 2nd shaft in 3 piece driveline	

[1] - Only available on 55500 HD DERATE & 5500 XG

[2] - Only available on the 5500 XG

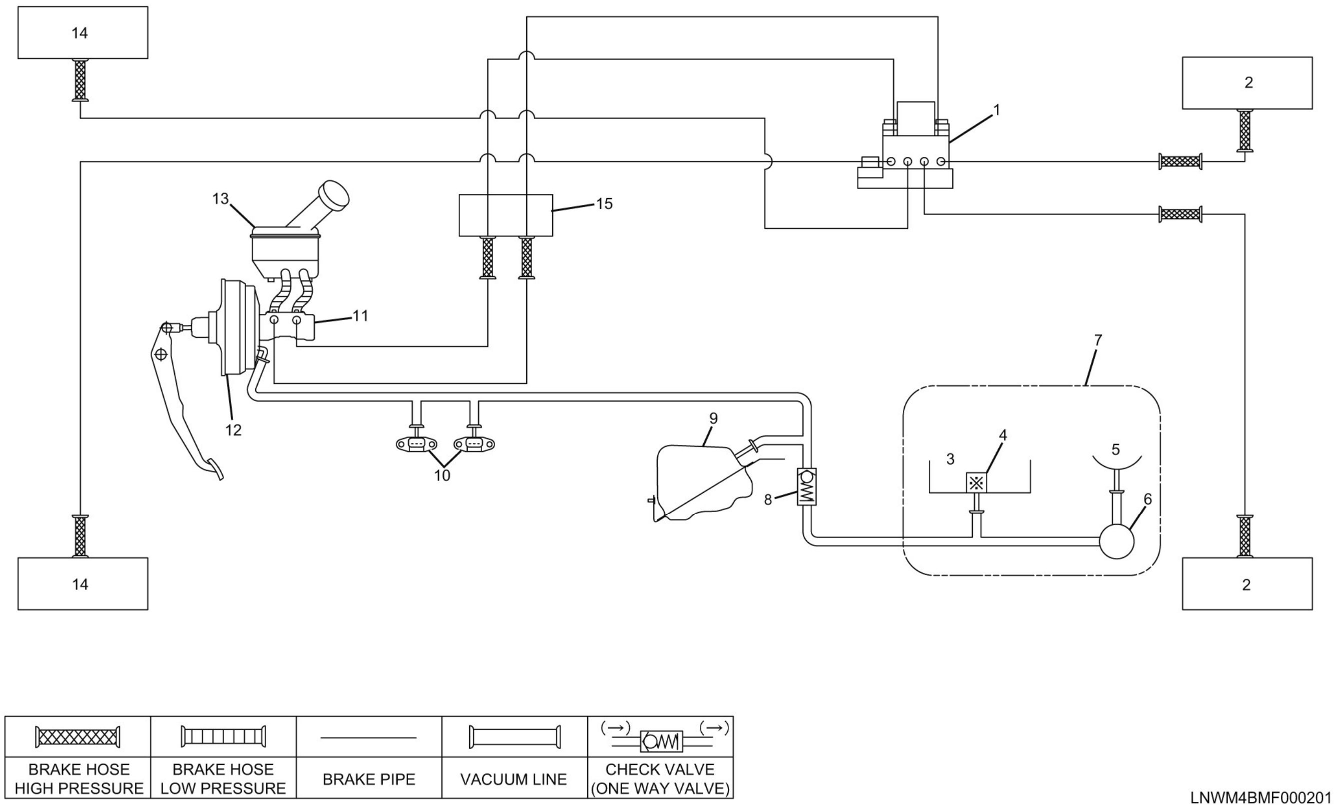
Figure 44

Note: Dimensions in inches

Brake System Diagram - 14,500 & 16,000 GVW

Vacuum Over Hydraulic

Please refer to Introduction Section of book for antilock system cautions and wheelbase modification requirements.


14
14
2
2
1
15
13
11
12
10
9
8
7
3
4
5
6
BRAKE HOSE HIGH PRESSURE
BRAKE HOSE LOW PRESSURE
BRAKE PIPE
VACUUM LINE
(→) (→)
CHECK VALVE (ONE WAY VALVE)
LNWM4BMF000201

Legend

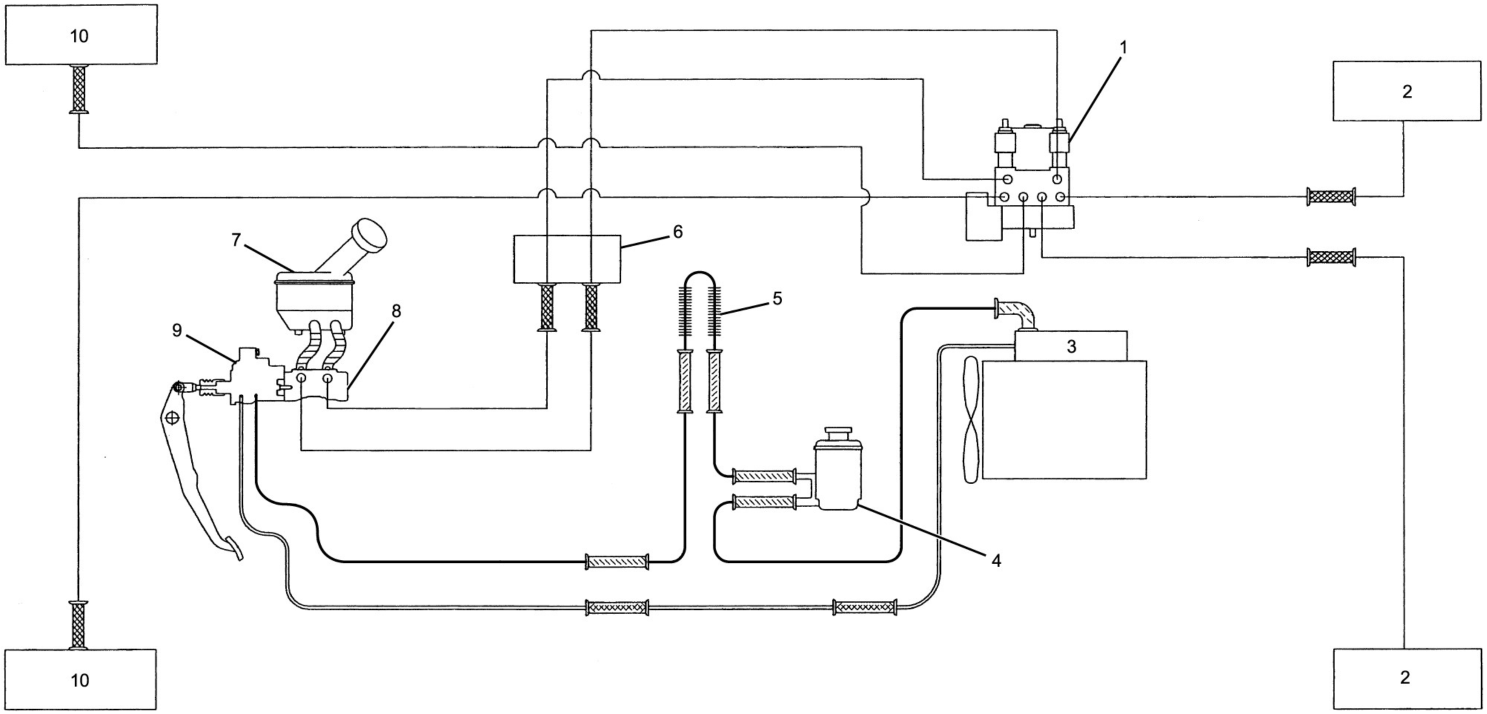
(1) Electronic Hydraulic Control Unit (EHCU)
(2) Rear Brake
(3) Vacuum Pump
(4) Check Valve
(5) Exhaust Brake Valve
(6) Magnetic Valve
(7) Exhaust Brake
(8) Check Valve (One-way Valve)
(9) Vacuum Tank
(10) Vacuum Sensor
(11) Vacuum Booster (Servo Unit)
(12) Master Cylinder
(13) Brake Fluid Reservoir
(14) Front Brake
(15) 4-Way Connector

Figure 45

Brake System Diagram - 17,950 & 19,500 GVW

Vacuum Over Hydraulic

Please refer to Introduction Section of book for antilock system cautions and wheelbase modification requirements.



Legend

(1) Electronic Hydraulic Control Unit (EHCU)
(2) Rear Brake
(3) Hydraulic Booster Oil Pump
(4) Hydraulic Booster Reservoir
(5) Cooler Pipe
(6) Pipe Connector
(7) Brake Fluid Reservoir
(8) Master Cylinder
(9) Hydraulic Booster Unit
(10) Front Brake

▩	▥	—	▨	▧	═	━
BRAKE HOSE HIGH PRESSURE	BRAKE HOSE LOW PRESSURE	BRAKE PIPE	HYDRAULIC HOSE (SUPPLY)	HYDRAULIC HOSE (RETURN/SUCTION)	HYDRAULIC PIPE (SUPPLY)	HYDRAULIC PIPE (RETURN/SUCTION)

LNWC5AMF000301

Figure 46

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	6500 XD
GVWR/GCWR	25,950 lbs. / 30,000 lbs.
WB	152 in., 170 in., 188 in., 200 in., 212 in., 224 in., 236 in., 248 in.
Engine	Cummins B6.7 diesel engine, 6-cylinder, turbocharged, inter-cooled, EGR cooler, high pressure common rail fuel system, and single module aftertreatment.
Model/Displacement	B6.7 / 408 CID (6.7L)
HP (Gross)	260 HP at 2400 RPM
Torque (Gross)	660 lb.-ft. torque at 1600 RPM with automatic transmission
Equipment	Dry element air cleaner with vertical intake; 1 row 748 in^2 radiator; 11 blade 24.8in diameter fan with electro-viscous drive. Cold weather starting device and an oil cooler. Engine oil level check switch and light. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function, coolant temperature, and low coolant level. Engine cruise control function.
Transmission	Allison 2550 RDS 6 speed automatic transmission. A single PTO opening on the left hand side of the transmission with a maximum torque value of 250 lb-ft.
Steering	Integral power steering. Tilt and Telescoping steering column. Steering ratio of 22.4:1
Front GAWR	11R22.5G tires - 12,000 lbs.; 255/70R22.5H tires - 11,000 lbs.
Front Axle	Dana E-1254W reverse Elliot "I"-Beam type steer axle rated at 12,000 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers, rated at 12,000 lbs.
Rear GAWR	19,000 lbs.
Rear Axle	Dana S19-140 single-speed, 19,000 lbs. capacity drive axle.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs rated at 21,000 lbs.
	Air spring suspension with single leveling valve, dual shock absorbers, and an in cab dump/fill switch rated at 23,000 lbs.
Wheels	22.5 x 8.25 inch 10 hole disc wheels, painted white.; 22.5 x 8.25 inch 10 hole aluminum disc wheels.
Tires	11R22.5G LRR (Low Rolling Resistance) tubeless steel belted radials, premium highway front tread and premium highway traction rear tread.
	255/70R22.5H LRR (Low Rolling Resistance) Low Profile, tubeless steel belted radials, premium highway front tread and premium highway traction rear tread.
Brakes	Dual circuit S-CAM drum air service brakes with 4 channel anti-lock brake system. An air operated exhaust brake, air controlled parking brake, heated air dryer, and automatic slack adjusters are standard.
Fuel Tank	50 / 100 gal. (depending on chassis wheelbase) rectangular aluminum fuel tank mounted on left hand frame. Includes a fuel water separator with indicator light.
Frame	Ladder type channel section straight frame rail, 33.5 in wide along the total length of the frame. Yield strength 80,000 psi; Section Modulus 12.69 cub. In, RBM 1,015,000 lb-in
Cab	All steel low cab forward, BBC 81.5 in, 45 degree mechanical tilt with torsion assist.
Cab Equipment	TRICOT breathable cloth covered high back air ride driver's seat with rigid passenger seat and center seat with fold down back. Dual cab mounted exterior mirrors with integral convex mirror and a right hand side mounted side cross mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass, AM/FM/CD stereo radio with Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer.
Electrical	12 Volt, negative ground, dual maintenance free batteries with threaded posts, 750 CCA each, 160 Amp alternator with integral regulator.
Options	See page 3 for options

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

Model	**7500 XD**
GVWR/GCWR	33,000 lbs. / 33,000 lbs.
WB	152 in., 170 in., 188 in., 200 in., 212 in., 224 in., 236 in., 248 in.
Engine	Cummins B6.7 diesel engine, 6-cylinder, turbocharged, inter-cooled, EGR cooler, high pressure common rail fuel system, and single module aftertreatment.
Model/Displacement	B6.7 / 408 CID (6.7L)
HP (Gross)	260 HP at 2400 RPM
Torque (Gross)	660 lb.-ft. torque at 1600 RPM with automatic transmission
Equipment	Dry element air cleaner with vertical intake; 1 row 748 in^2 radiator; 11 blade 24.8in diameter fan with electro-viscous drive. Cold weather starting device and an oil cooler. Engine oil level check switch and light. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function, coolant temperature, and low coolant level. Engine cruise control function.
Transmission	Allison 2500 RDS 6 speed automatic transmission. A single PTO opening on the left hand side of the transmission with a maximum torque value of 250 lb-ft.
Steering	Integral power steering. Tilt and Telescoping steering column. Steering ratio of 22.4:1
Front GAWR	11R22.5G tires - 12,000 lbs.
Front Axle	Dana E-1254W reverse Elliot “I”-Beam type steer axle rated at 12,000 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers, rated at 12,000 lbs.
Rear GAWR	21,000 lbs.
Rear Axle	Dana S21-140 single-speed, 21,000 lbs. capacity drive axle.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs rated at 21,000 lbs.
	Air spring suspension with single leveling valve, dual shock absorbers, and an in cab dump/fill switch rated at 23,000 lbs.
Wheels	22.5 x 8.25 inch 10 hole disc wheels, painted white.; 22.5 x 8.25 inch 10 hole aluminum disc wheels.
Tires	11R22.5G LRR (Low Rolling Resistance) tubeless steel belted radials, premium highway front tread and premium highway traction rear tread.
Brakes	Dual circuit S-CAM drum air service brakes with 4 channel anti-lock brake system. An air operated exhaust brake, air controlled parking brake, heated air dryer, and automatic slack adjusters are standard.
Fuel Tank	50 / 100 gal. (depending on chassis wheelbase) rectangular aluminum fuel tank mounted on left hand frame. Includes a fuel water separator with indicator light.
Frame	Ladder type channel section straight frame rail, 33.5 in wide along the total length of the frame. Yield strength 80,000 psi; Section Modulus 12.69 cub. In, RBM 1,015,000 lb-in
Cab	All steel low cab forward, BBC 81.5 in, 45 degree mechanical tilt with torsion assist.
Cab Equipment	TRICOT breathable cloth covered high back air ride driver’s seat with rigid passenger seat and center seat with fold down back. Dual cab mounted exterior mirrors with integral convex mirror and a right hand side mounted side cross mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass, AM/FM/CD stereo radio with Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer.
Electrical	12 Volt, negative ground, dual maintenance free batteries with threaded posts, 750 CCA each, 160 Amp alternator with integral regulator.
Options	See page 3 for options

NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Chassis Specifications

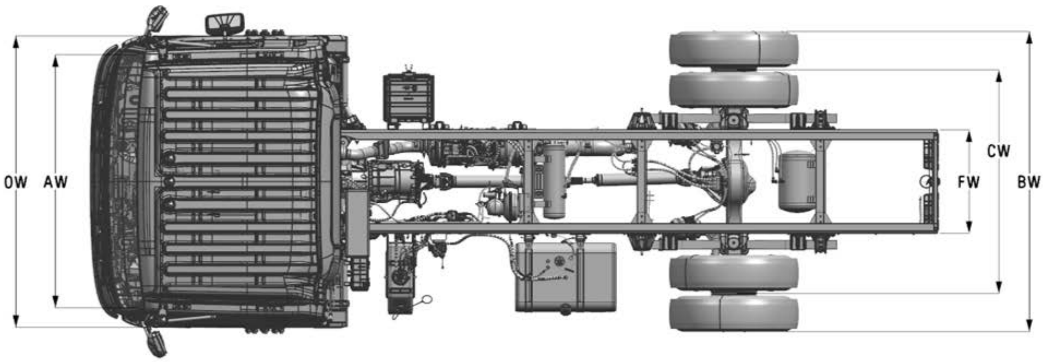
Model	7500 XD DERATE
GVWR/GCWR	25,950 lbs. / 33,000 lbs.
WB	152 in., 170 in., 188 in., 200 in., 212 in., 224 in., 236 in., 248 in.
Engine	Cummins B6.7 diesel engine, 6-cylinder, turbocharged, inter-cooled, EGR cooler, high pressure common rail fuel system, and single module aftertreatment.
Model/Displacement	B6.7 / 408 CID (6.7L)
HP (Gross)	260 HP at 2400 RPM
Torque (Gross)	660 lb.-ft. torque at 1600 RPM with automatic transmission
Equipment	Dry element air cleaner with vertical intake; 1 row 748 in^2 radiator; 11 blade 24.8in diameter fan with electro-viscous drive. Cold weather starting device and an oil cooler. Engine oil level check switch and light. Engine warning system with audible warning for low oil pressure, high coolant temperature, and low coolant level. Engine cruise control function, coolant temperature, and low coolant level. Engine cruise control function.
Transmission	Allison 2500 RDS 6 speed automatic transmission. A single PTO opening on the left hand side of the transmission with a maximum torque value of 250 lb-ft.
Steering	Integral power steering. Tilt and Telescoping steering column. Steering ratio of 22.4:1
Front GAWR	11R22.5G tires - 12,000 lbs.
Front Axle	Dana E-1254W reverse Elliot “I”-Beam type steer axle rated at 12,000 lbs.
Front Suspension	Semi-elliptical steel alloy tapered leaf springs with stabilizer bar and shock absorbers, rated at 12,000 lbs.
Rear GAWR	21,000 lbs.
Rear Axle	Dana S21-140 single-speed, 21,000 lbs. capacity drive axle.
Rear Suspension	Semi-elliptical steel alloy multi-leaf springs rated at 21,000 lbs.
	Air spring suspension with single leveling valve, dual shock absorbers, and an in cab dump/fill switch rated at 23,000 lbs.
Wheels	22.5 x 8.25 inch 10 hole disc wheels, painted white.; 22.5 x 8.25 inch 10 hole aluminum disc wheels.
Tires	11R22.5G LRR (Low Rolling Resistance) tubeless steel belted radials, premium highway front tread and premium highway traction rear tread.
Brakes	Dual circuit S-CAM drum air service brakes with 4 channel anti-lock brake system. An air operated exhaust brake, air controlled parking brake, heated air dryer, and automatic slack adjusters are standard.
Fuel Tank	50 / 100 gal. (depending on chassis wheelbase) rectangular aluminum fuel tank mounted on left hand frame. Includes a fuel water separator with indicator light.
Frame	Ladder type channel section straight frame rail, 33.5 in wide along the total length of the frame. Yield strength 80,000 psi; Section Modulus 12.69 cub. In, RBM 1,015,000 lb-in
Cab	All steel low cab forward, BBC 81.5 in, 45 degree mechanical tilt with torsion assist.
Cab Equipment	TRICOT breathable cloth covered high back air ride driver’s seat with rigid passenger seat and center seat with fold down back. Dual cab mounted exterior mirrors with integral convex mirror and a right hand side mounted side cross mirror. Tilt and telescoping steering column. Power windows and door locks, floor mats, tinted glass, AM/FM/CD stereo radio with Bluetooth. Rear body dome lamp switch. Cab latch switch with indicator and buzzer.
Electrical	12 Volt, negative ground, dual maintenance free batteries with threaded posts, 750 CCA each, 160 Amp alternator with integral regulator.
Options	See page 3 for options

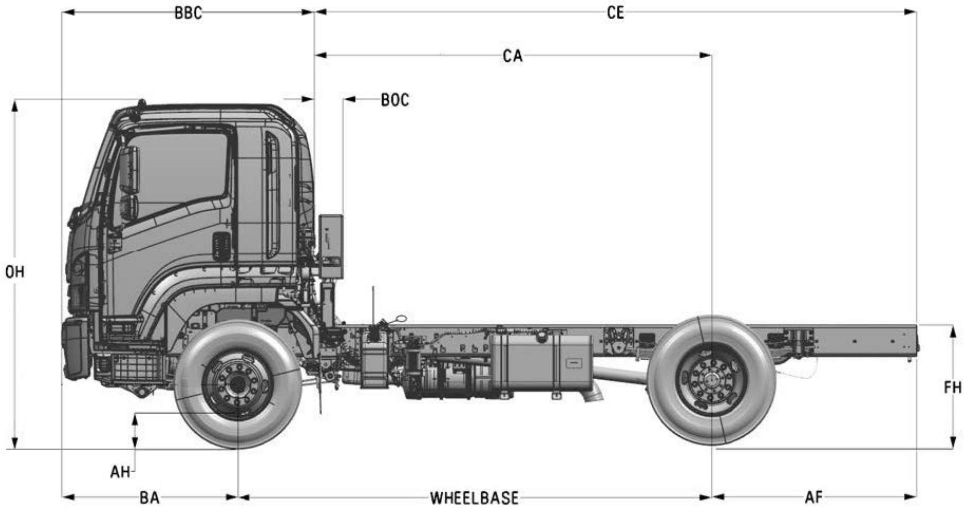
NOTE: These selected specifications are subject to change without notice.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings

6500 XD *Multi-leaf Suspension*





CHASSIS DIMENSIONS (in)						
MODEL	WB	CA[1]	CE[2]	AF	FL	OAL
MT1	152	127	192.9	65.9	270.5	274.4
MT2	170	145	220	75	297.6	301.5
MT3	188	163	247	84.1	324.6	328.5
MT4	200	175	264.9	90	342.5	346.4
MT5	212	187	283.1	96.1	360.6	364.6
MT6	224	199	301	102	378.5	382.5
MT7	236	211	319.1	108.1	396.7	400.6
MT8	248	223	337	114	414.6	418.5

DIMENSION CONSTANTS (in)	
AW = Front axle track	81.1
BA = Front bumper to centerline of axle	56.5
BBC = Bumper to back of cab	81.5
BOC = Back of cab clearance	10.4
BW = Overall width across rear axle	96
CW = Rear axle track	72.2
FW = Frame width	33.5
OW = Overall width across cab (without mirrors)	93.5

DIMENSIONS BY TIRE SIZE (in.)	11R22.5G	255/70R22.5H
AH = Ground to bottom of axle	10	7.7
FH = Frame height (unladen) at E.O.F.[3]	42.5	39.9
FH = Frame height (unladen) at R/A[4]	41	39.2
FH = Frame height (laden) at R/A[5]	37.5	36.4
OH = Overall height	112	110.2

Notes:

[1] Effective CA is CA less BOC.

[2] Effective CE is CE less BOC.

[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.

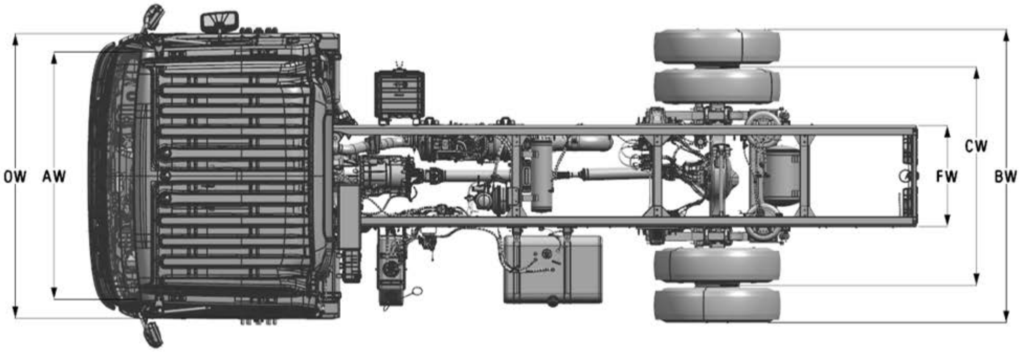
[4] Measured at the rear axle from the top of the frame to the ground with the chassis at curb

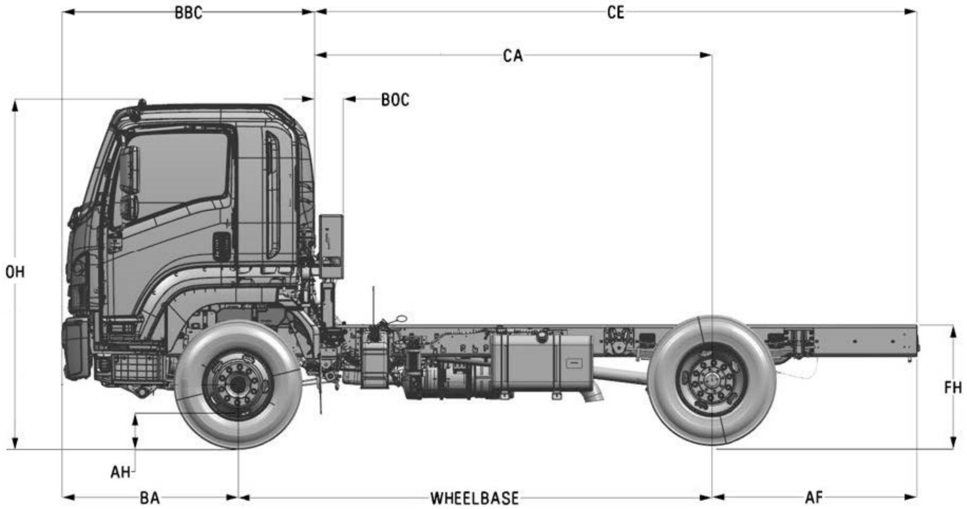
[5] Measured at the rear axle from the top of the frame to the ground with the chassis loaded to GVWR.

[6] AT1, AT3, AT5 and AT6 are CARB Legacy models.

Vehicle Weights, Dimensions and Ratings

6500 XD *Air-spring Suspension*





CHASSIS DIMENSIONS (in)						
MODEL	WB	CA[1]	CE[2]	AF	FL	OAL
MT1	152	127	192.9	65.9	270.5	274.4
MT2	170	145	220	75	297.6	301.5
MT3	188	163	247	84.1	324.6	328.5
MT4	200	175	264.9	90	342.5	346.4
MT5	212	187	283.1	96.1	360.6	364.6
MT6	224	199	301	102	378.5	382.5
MT7	236	211	319.1	108.1	396.7	400.6
MT8	248	223	337	114	414.6	418.5

DIMENSION CONSTANTS (in)	
AW = Front axle track	81.1
BA = Front bumper to centerline of axle	56.5
BBC = Bumper to back of cab	81.5
BOC = Back of cab clearance	10.4
BW = Overall width across rear axle	96
CW = Rear axle track	72.2
FW = Frame width	33.5
OW = Overall width across cab (without mirrors)	93.5

DIMENSIONS BY TIRE SIZE (in.)	11R22.5G	255/70R22.5H
AH = Ground to bottom of axle	10	7.7
FH = Frame height (unladen) at E.O.F.[3]	38.2	35.9
FH = Frame height (unladen) at R/A[4]	38.2	35.9
FH = Frame height (laden) at R/A[5]	38.2	35.9
FH = Frame height (dump position) at R/A	35.3	33
OH = Overall height	108.6	107

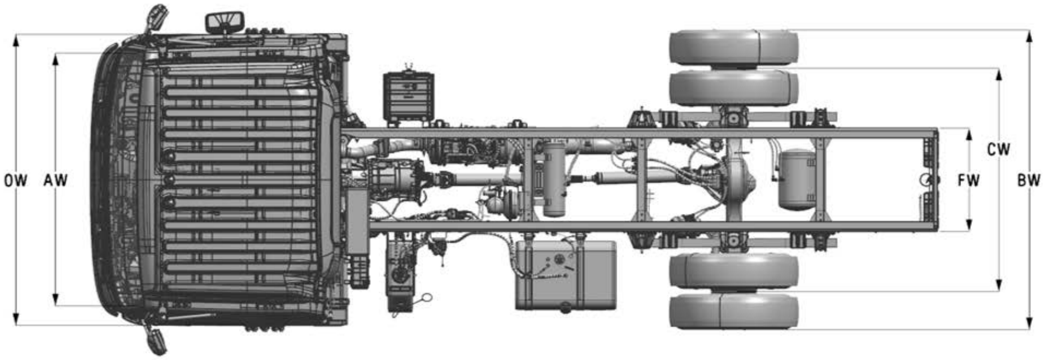
Notes:

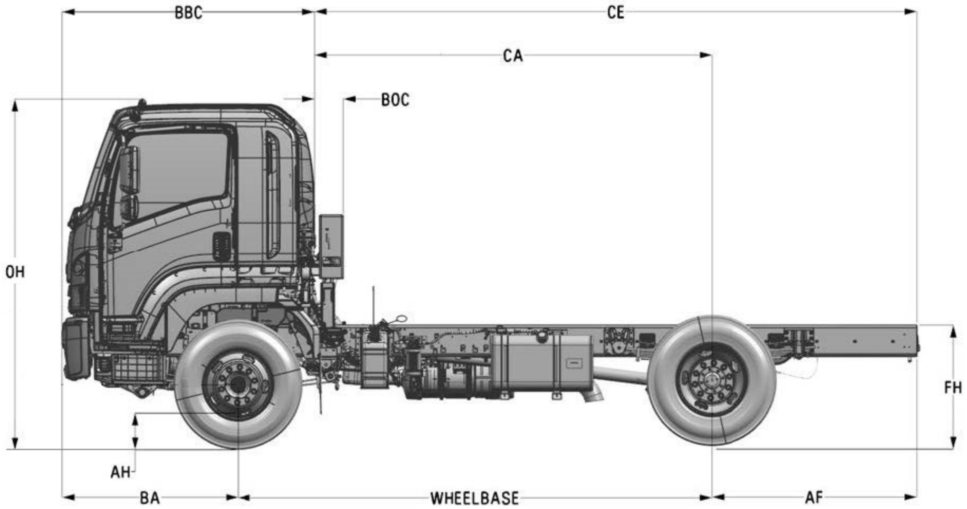
[1] Effective CA is CA less BOC.
[2] Effective CE is CE less BOC.
[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.
[4] Measured at the rear axle from the top of the frame to the ground with the chassis at curb
[5] Measured at the rear axle from the top of the frame to the ground with the chassis loaded to GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings 6500 XD / 7500 XD

Derate Multi-leaf Suspension





CHASSIS DIMENSIONS (in)						
MODEL	WB	CA[1]	CE[2]	AF	FL	OAL
MV1 / MW1	152	127	192.9	65.9	270.5	274.4
MV2 / MW2	170	145	220	75	297.6	301.5
MV3 / MW3	188	163	247	84.1	324.6	328.5
MV4 / MW4	200	175	264.9	90	342.5	346.4
MV5 / MW5	212	187	283.1	96.1	360.6	364.6
MV6 / MW6	224	199	301	102	378.5	382.5
MV7 / MW7	236	211	319.1	108.1	396.7	400.6
MV8 / MW8	248	223	337	114	414.6	418.5

DIMENSION CONSTANTS (in)	
AW = Front axle track	81.1
BA = Front bumper to centerline of axle	56.5
BBC = Bumper to back of cab	81.5
BOC = Back of cab clearance	10.4
BW = Overall width across rear axle	96
CW = Rear axle track	72.2
FW = Frame width	33.5
OW = Overall width across cab (without mirrors)	93.5
DIMENSIONS BY TIRE SIZE (in.)	**11R22.5G**
AH = Ground to bottom of axle	10
FH = Frame height (unladen) at E.O.F.[3]	42.5
FH = Frame height (unladen) at R/A[4]	41
FH = Frame height (laden) at R/A[5]	37.5
OH = Overall height	112

Notes:

[1] Effective CA is CA less BOC.

[2] Effective CE is CE less BOC.

[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.

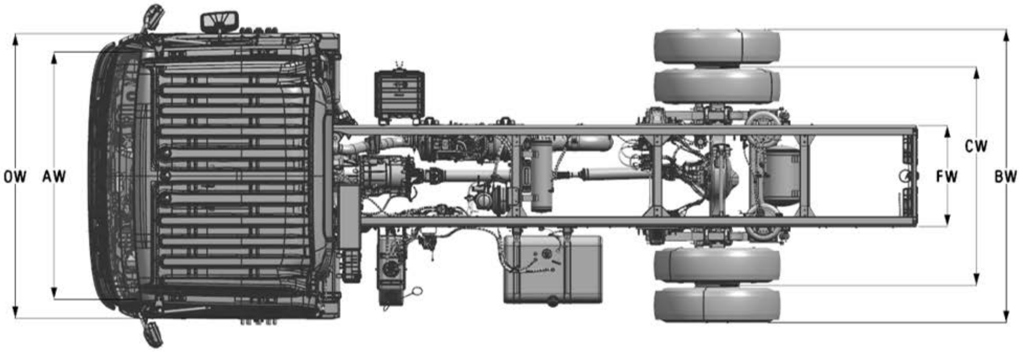
[4] Measured at the rear axle from the top of the frame to the ground with the chassis at curb

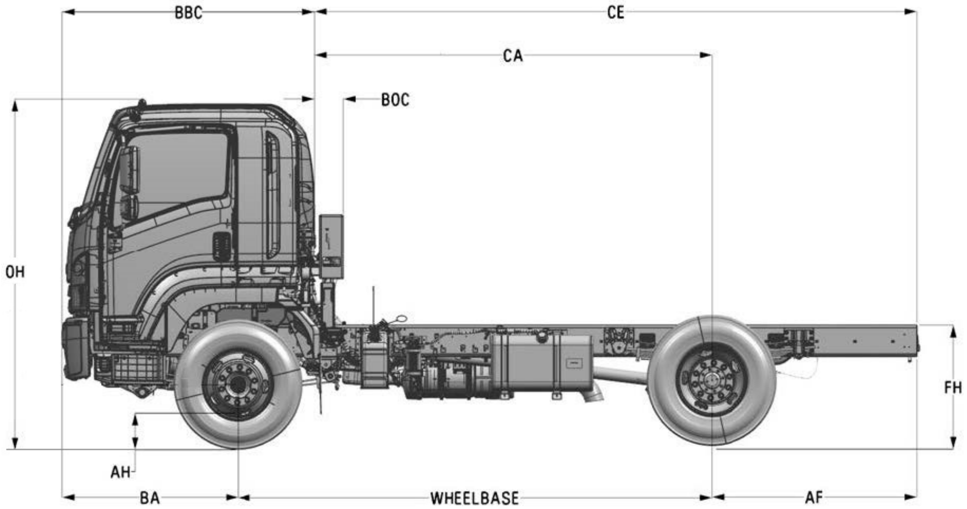
[5] Measured at the rear axle from the top of the frame to the ground with the chassis loaded to GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings 6500 XD / 7500 XD

Derate Multi-leaf Suspension





CHASSIS DIMENSIONS (in)						
MODEL	WB	CA[1]	CE[2]	AF	FL	OAL
MV1 / MW1	152	127	192.9	65.9	270.5	274.4
MV2 / MW2	170	145	220	75	297.6	301.5
MV3 / MW3	188	163	247	84.1	324.6	328.5
MV4 / MW4	200	175	264.9	90	342.5	346.4
MV5 / MW5	212	187	283.1	96.1	360.6	364.6
MV6 / MW6	224	199	301	102	378.5	382.5
MV7 / MW7	236	211	319.1	108.1	396.7	400.6
MV8 / MW8	248	223	337	114	414.6	418.5

DIMENSION CONSTANTS (in)	
AW = Front axle track	81.1
BA = Front bumper to centerline of axle	56.5
BBC = Bumper to back of cab	81.5
BOC = Back of cab clearance	10.4
BW = Overall width across rear axle	96
CW = Rear axle track	72.2
FW = Frame width	33.5
OW = Overall width across cab (without mirrors)	93.5
DIMENSIONS BY TIRE SIZE (in.)	11R22.5G
AH = Ground to bottom of axle	10
FH = Frame height (unladen) at E.O.F.[3]	38.2
FH = Frame height (unladen) at R/A[4]	38.2
FH = Frame height (laden) at R/A[5]	38.2
FH = Frame height (dump position) at R/A	35.3
OH = Overall height	108.6

Notes:

[1] Effective CA is CA less BOC.
[2] Effective CE is CE less BOC.
[3] Measured at the end of the frame from the top of the frame to the ground at curb weight.
[4] Measured at the rear axle from the top of the frame to the ground with the chassis at curb
[5] Measured at the rear axle from the top of the frame to the ground with the chassis loaded to GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings 6500 XD / 7500 XD

Derate Multi-leaf Suspension

VEHICLE WEIGHT LIMITS		
Rating	Tire	Capacity
GVWR Designed Maximum	All tire options	25,950 lb
GCWR Combined Maximum	All tire options	30,000 lb
Front GAWR	11R22.5G tires	12,000 lb
	255/70R22.5H tires	11,000 lb
Rear GAWR	All tire options	19,000 lb

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
6500 XD LEAF SUSPENSION - STANDARD TIRES									
MT1	G1	152	50	11R22.5	5.57	6575	3668	10243	15707
MT2	G1	170	50	11R22.5	5.57	6650	3671	10321	15629
MT3	G1	188	50	11R22.5	5.57	6724	3780	10504	15446
MT3	G2	188	100	11R22.5	5.57	6773	3852	10625	15325
MT4	G1	200	50	11R22.5	5.57	6823	3925	10748	15202
MT4	G2	200	100	11R22.5	5.57	6872	3997	10869	15081
MT5	G1	212	50	11R22.5	5.57	6850	3986	10836	15114
MT5	G2	212	100	11R22.5	5.57	6912	4046	10958	14992
MT6	G1	224	50	11R22.5	5.57	6973	4108	11081	14869
MT6	G2	224	100	11R22.5	5.57	7031	4170	11201	14749
MT7	G2	236	100	11R22.5	5.57	7093	4231	11324	14626
MT8	G2	248	100	11R22.5	5.57	7153	4292	11445	14505
6500 XD LEAF SUSPENSION - LOW PROFILE TIRES									
MT1	G5	152	50	255/70R22.5	4.88	6503	3515	10018	15932
MT2	G5	170	50	255/70R22.5	4.88	6578	3518	10096	15854
MT3	G5	188	50	255/70R22.5	4.88	6652	3627	10279	15671
MT3	G6	188	100	255/70R22.5	4.88	6701	3699	10400	15550
MT4	G5	200	50	255/70R22.5	4.88	6751	3772	10523	15427
MT4	G6	200	100	255/70R22.5	4.88	6800	3844	10644	15306
MT5	G5	212	50	255/70R22.5	4.88	6778	3833	10611	15339
MT5	G6	212	100	255/70R22.5	4.88	6840	3893	10733	15217
MT6	G5	224	50	255/70R22.5	4.88	6901	3955	10856	15094
MT6	G6	224	100	255/70R22.5	4.88	6959	4017	10976	14974
MT7	G6	236	100	255/70R22.5	4.88	7021	4078	11099	14851
MT8	G6	248	100	255/70R22.5	4.88	7081	4139	11220	14730

Notes: [1] Chassis Curb Weight reflects standard equipment and fuel, but no driver or payload.

[2] Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weights, Dimensions and Ratings

Multi-leaf Suspension - 6500 XD

VEHICLE WEIGHT LIMITS		
Rating	Tire	Capacity
GVWR Designed Maximum	All tire options	25,950 lb
GCWR Combined Maximum	All tire options	30,000 lb
Front GAWR	11R22.5G tires	12,000 lb
	255/70R22.5H tires	11,000 lb
Rear GAWR	All tire options	19,000 lb

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
6500 XD LEAF SUSPENSION - STANDARD TIRES - ALUMINUM WHEELS									
MT1	A1	152	50	11R22.5	5.57	6519	3556	10075	15875
MT2	A1	170	50	11R22.5	5.57	6594	3559	10153	15797
MT3	A1	188	50	11R22.5	5.57	6668	3668	10336	15614
MT3	A2	188	100	11R22.5	5.57	6717	3740	10457	15493
MT4	A1	200	50	11R22.5	5.57	6767	3813	10580	15370
MT4	A2	200	100	11R22.5	5.57	6816	3885	10701	15249
MT5	A1	212	50	11R22.5	5.57	6794	3874	10668	15282
MT5	A2	212	100	11R22.5	5.57	6856	3934	10790	15160
MT6	A1	224	50	11R22.5	5.57	6917	3996	10913	15037
MT6	A2	224	100	11R22.5	5.57	6975	4058	11033	14917
MT7	A2	236	100	11R22.5	5.57	7037	4119	11156	14794
MT8	A2	248	100	11R22.5	5.57	7097	4180	11277	14673
6500 XD LEAF SUSPENSION - LOW PROFILE TIRES - ALUMINUM WHEELS									
MT1	A5	152	50	255/70R22.5	4.88	6447	3403	9850	16100
MT2	A5	170	50	255/70R22.5	4.88	6522	3406	9928	16022
MT3	A5	188	50	255/70R22.5	4.88	6596	3515	10111	15839
MT3	A6	188	100	255/70R22.5	4.88	6645	3587	10232	15718
MT4	A5	200	50	255/70R22.5	4.88	6695	3660	10355	15595
MT4	A6	200	100	255/70R22.5	4.88	6744	3732	10476	15474
MT5	A5	212	50	255/70R22.5	4.88	6722	3721	10443	15507
MT5	A6	212	100	255/70R22.5	4.88	6784	3781	10565	15385
MT6	A5	224	50	255/70R22.5	4.88	6845	3843	10688	15262
MT6	A6	224	100	255/70R22.5	4.88	6903	3905	10808	15142
MT7	A6	236	100	255/70R22.5	4.88	6965	3966	10931	15019
MT8	A6	248	100	255/70R22.5	4.88	7025	4027	11052	14898

Notes: [1] Chassis Curb Weight reflects standard equipment and fuel, but no driver or payload.

[2] Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings

Air-spring Suspension - 6500 XD

VEHICLE WEIGHT LIMITS		
Rating	Tire	Capacity
GVWR Designed Maximum	All tire options	25,950 lb
GCWR Combined Maximum	All tire options	30,000 lb
Front GAWR	11R22.5G tires	12,000 lb
	255/70R22.5H tires	11,000 lb
Rear GAWR	All tire options	19,000 lb

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
6500 XD AIR SUSPENSION- STANDARD TIRES									
MT1	G3	152	50	11R22.5	5.57	6575	3504	10079	15871
MT2	G3	170	50	11R22.5	5.57	6650	3507	10157	15793
MT3	G3	188	50	11R22.5	5.57	6724	3616	10340	15610
MT3	G4	188	100	11R22.5	5.57	6773	3688	10461	15489
MT4	G3	200	50	11R22.5	5.57	6823	3761	10584	15366
MT4	G4	200	100	11R22.5	5.57	6872	3833	10705	15245
MT5	G3	212	50	11R22.5	5.57	6850	3822	10672	15278
MT5	G4	212	100	11R22.5	5.57	6912	3882	10794	15156
MT6	G3	224	50	11R22.5	5.57	6973	3944	10917	15033
MT6	G4	224	100	11R22.5	5.57	7031	4006	11037	14913
MT7	G4	236	100	11R22.5	5.57	7093	4067	11160	14790
MT8	G4	248	100	11R22.5	5.57	7153	4128	11281	14669
6500 XD AIR SUSPENSION - LOW PROFILE TIRES									
MT1	G7	152	50	255/70R22.5	4.88	6503	3351	9854	16096
MT2	G7	170	50	255/70R22.5	4.88	6578	3354	9932	16018
MT3	G7	188	50	255/70R22.5	4.88	6652	3463	10115	15835
MT3	G8	188	100	255/70R22.5	4.88	6701	3535	10236	15714
MT4	G7	200	50	255/70R22.5	4.88	6751	3608	10359	15591
MT4	G8	200	100	255/70R22.5	4.88	6800	3680	10480	15470
MT5	G7	212	50	255/70R22.5	4.88	6778	3669	10447	15503
MT5	G8	212	100	255/70R22.5	4.88	6840	3729	10569	15381
MT6	G7	224	50	255/70R22.5	4.88	6901	3791	10692	15258
MT6	G8	224	100	255/70R22.5	4.88	6959	3853	10812	15138
MT7	G8	236	100	255/70R22.5	4.88	7021	3914	10935	15015
MT8	G8	248	100	255/70R22.5	4.88	7081	3975	11056	14894

Notes: [1] Chassis Curb Weight reflects standard equipment and fuel, but no driver or payload.

[2] Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weights, Dimensions and Ratings

Air-spring Suspension - 6500 XD

VEHICLE WEIGHT LIMITS		
Rating	Tire	Capacity
GVWR Designed Maximum	All tire options	25,950 lb
GCWR Combined Maximum	All tire options	30,000 lb
Front GAWR	11R22.5G tires	12,000 lb
	255/70R22.5H tires	11,000 lb
Rear GAWR	All tire options	19,000 lb

CURB WEIGHTS AND PAYLOAD

COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
6500 XD AIR SUSPENSION- STANDARD TIRES - ALUMINUM WHEELS									
MT1	A3	152	50	11R22.5	5.57	6519	3392	9911	16039
MT2	A3	170	50	11R22.5	5.57	6594	3395	9989	15961
MT3	A3	188	50	11R22.5	5.57	6668	3504	10172	15778
MT3	A4	188	100	11R22.5	5.57	6717	3576	10293	15657
MT4	A3	200	50	11R22.5	5.57	6767	3649	10416	15534
MT4	A4	200	100	11R22.5	5.57	6816	3721	10537	15413
MT5	A3	212	50	11R22.5	5.57	6794	3710	10504	15446
MT5	A4	212	100	11R22.5	5.57	6856	3770	10626	15324
MT6	A3	224	50	11R22.5	5.57	6917	3832	10749	15201
MT6	A4	224	100	11R22.5	5.57	6975	3894	10869	15081
MT7	A4	236	100	11R22.5	5.57	7037	3955	10992	14958
MT8	A4	248	100	11R22.5	5.57	7097	4016	11113	14837
6500 XD AIR SUSPENSION - LOW PROFILE TIRES - ALUMINUM WHEELS									
MT1	A7	152	50	255/70R22.5	4.88	6447	3239	9686	16264
MT2	A7	170	50	255/70R22.5	4.88	6522	3242	9764	16186
MT3	A7	188	50	255/70R22.5	4.88	6596	3351	9947	16003
MT3	A8	188	100	255/70R22.5	4.88	6645	3423	10068	15882
MT4	A7	200	50	255/70R22.5	4.88	6695	3496	10191	15759
MT4	A8	200	100	255/70R22.5	4.88	6744	3568	10312	15638
MT5	A7	212	50	255/70R22.5	4.88	6722	3557	10279	15671
MT5	A8	212	100	255/70R22.5	4.88	6784	3617	10401	15549
MT6	A7	224	50	255/70R22.5	4.88	6845	3679	10524	15426
MT6	A8	224	100	255/70R22.5	4.88	6903	3741	10644	15306
MT7	A8	236	100	255/70R22.5	4.88	6965	3802	10767	15183
MT8	A8	248	100	255/70R22.5	4.88	7025	3863	10888	15062

Notes: [1] Chassis Curb Weight reflects standard equipment and fuel, but no driver or payload.

[2] Maximum Payload Weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weights, Dimensions and Ratings
Multi-leaf Suspension - 7500 XD

CHASSIS WEIGHT RATINGS		
Description	Tires	Capacity (lb)
Front GAWR	11R22.5G	12,000
Rear GAWR	ALL TIRE OPTIONS	21,000
GVWR Designed Maximum		33,000
GCWR Combined Maximum		33,000

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
7500 D Standard Tires - Leaf Suspension									
MV1	G1	152	50	11R22.5	5.57	6575	3768	10343	22657
MV2	G1	170	50			6650	3771	10421	22579
MV3	G2	188	100			6850	4086	10936	22064
MV4	G2	200	100			6912	4146	11058	21942
MV5	G2	212	100			6973	4208	11181	21819
MV6	G2	224	100			7031	4270	11301	21699
MV7	G2	236	100			7093	4331	11424	21576
MV8	G2	248	100			7153	4392	11545	21455
7500 X D Standard Tires - Leaf Suspension - Aluminum Wheels									
MV1	A1	152	50	11R22.5	5.57	6519	3656	10175	22825
MV2	A1	170	50			6594	3659	10253	22747
MV3	A2	188	100			6794	3974	10768	22232
MV4	A2	200	100			6856	4034	10890	22110
MV5	A2	212	100			6917	4096	11012	21988
MV6	A2	224	100			6975	4158	11133	21867
MV7	A2	236	100			7037	4219	11256	21744
MV8	A2	248	100			7097	4280	11377	21623

NOTES: [1] Curb weights reflect standard equipment and fuel, but no driver or payload.

[2] Payload weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings

Multi-leaf Suspension - 7500 XD DERATE

CHASSIS WEIGHT RATINGS		
Description	Tires	Capacity (lb)
Front GAWR	11R22.5G	12,000
Rear GAWR	ALL TIRE OPTIONS	21,000
GVWR Designed Maximum		25,950
GCWR Combined Maximum		33,000

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
7500 X D DERATE Standard Tires - Leaf Suspension									
MW1	G1	152	50	11R22.5	5.57	6575	3768	10343	15607
MW2	G1	170	50			6650	3771	10421	15529
MW3	G2	188	100			6850	4086	10937	15014
MW4	G2	200	100			6912	4146	11058	14893
MW5	G2	212	100			6973	4208	11181	14770
MW6	G2	224	100			7031	4270	11302	14649
MW7	G2	236	100			7093	4331	11424	14527
MW8	G2	248	100			7153	4392	11545	14405
7500 X D DERATE Standard Tires - Leaf Suspension - Aluminum Wheels									
MW1	A1	152	50	11R22.5	5.57	6519	3656	10175	15775
MW2	A1	170	50			6594	3659	10253	15697
MW3	A2	188	100			6794	3974	10769	15182
MW4	A2	200	100			6856	4034	10890	15061
MW5	A2	212	100			6917	4096	11013	14938
MW6	A2	224	100			6975	4158	11134	14817
MW7	A2	236	100			7037	4219	11256	14695
MW8	A2	248	100			7097	4280	11377	14573

NOTES: [1] Curb weights reflect standard equipment and fuel, but no driver or payload.

[2] Payload weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

2026 Chevrolet Low Cab Forward

Vehicle Weights, Dimensions and Ratings
Air-spring Suspension - 7500 XD

CHASSIS WEIGHT RATINGS		
Description	Tires	Capacity (lb)
Front GAWR	11R22.5G	12,000
Rear GAWR	ALL TIRE OPTIONS	21,000
GVWR Designed Maximum		33,000
GCWR Combined Maximum		33,000

CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
7500 X D Standard Tires - Air Suspension									
MV1	G3	152	50	11R22.5	5.57	6575	3604	10179	22821
MV2	G3	170	50			6650	3607	10257	22743
MV3	G4	188	100			6850	3922	10772	22228
MV4	G4	200	100			6912	3982	10894	22106
MV5	G4	212	100			6973	4044	11017	21983
MV6	G4	224	100			7031	4106	11137	21863
MV7	G4	236	100			7093	4167	11260	21740
MV8	G4	248	100			7153	4228	11381	21619
7500 X D Standard Tires - Air Suspension - Aluminum Wheels									
MV1	A3	152	50	11R22.5	5.57	6519	3492	10011	22989
MV2	A3	170	50			6594	3495	10089	22911
MV3	A4	188	100			6794	3810	10604	22396
MV4	A4	200	100			6856	3870	10726	22274
MV5	A4	212	100			6917	3932	10849	22151
MV6	A4	224	100			6975	3994	10969	22031
MV7	A4	236	100			7037	4055	11092	21908
MV8	A4	248	100			7097	4116	11213	21787

NOTES: [1] Curb weights reflect standard equipment and fuel, but no driver or payload.

[2] Payload weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

Vehicle Weights, Dimensions and Ratings

Air-spring Suspension - 7500 XD DERATE

CHASSIS WEIGHT RATINGS		
Description	Tires	Capacity (lb)
Front GAWR	11R22.5G	12,000
Rear GAWR	ALL TIRE OPTIONS	21,000
GVWR Designed Maximum		25,950
GCWR Combined Maximum		33,000

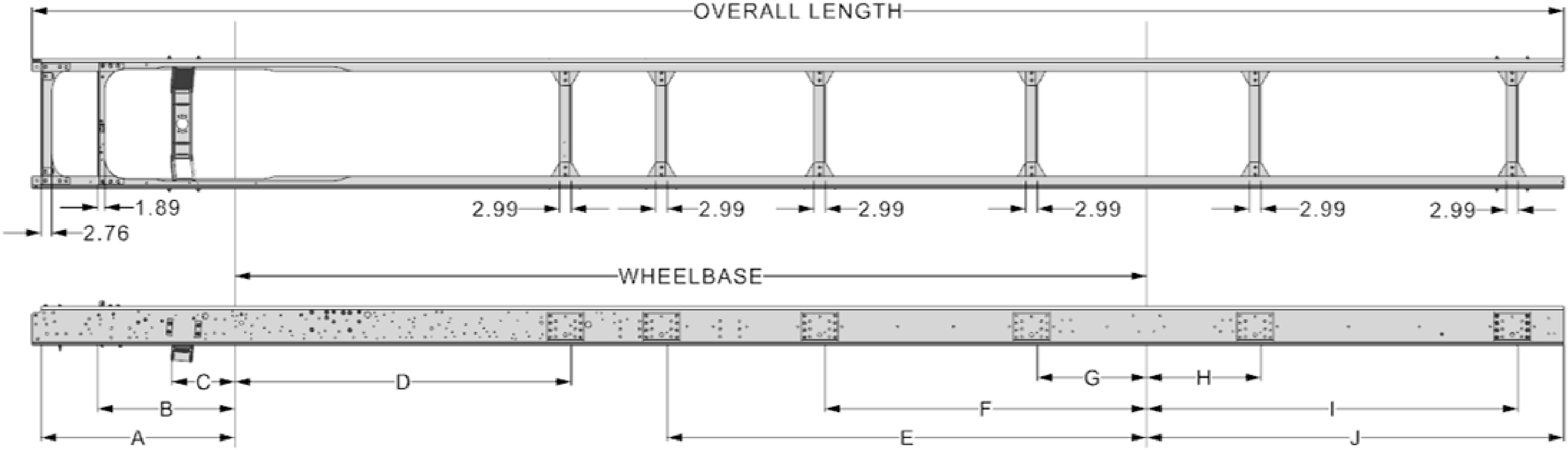
CURB WEIGHTS AND PAYLOAD									
COC	OCC	WB (in)	Fuel Tank Capacity (gal)	Tire Size	Final Ratio	Front (lb)	Rear (lb)	Total (lb)	Payload (lb)
7500 X D DERATE Standard Tires - Air Suspension									
MW1	G3	152	50	11R22.5	5.57	6575	3604	10179	15771
MW2	G3	170	50			6650	3607	10257	15693
MW3	G4	188	100			6850	3922	10773	15178
MW4	G4	200	100			6912	3982	10894	15057
MW5	G4	212	100			6973	4044	11017	14934
MW6	G4	224	100			7031	4106	11138	14813
MW7	G4	236	100			7093	4167	11260	14691
MW8	G4	248	100			7153	4228	11381	14569
7500 X D DERATE Standard Tires - Air Suspension - Aluminum Wheels									
MW1	A3	152	50	11R22.5	5.57	6519	3492	10011	15939
MW2	A3	170	50			6594	3495	10089	15861
MW3	A4	188	100			6794	3810	10605	15346
MW4	A4	200	100			6856	3870	10726	15225
MW5	A4	212	100			6917	3932	10849	15102
MW6	A4	224	100			6975	3994	10970	14981
MW7	A4	236	100			7037	4055	11092	14859
MW8	A4	248	100			7097	4116	11213	14737

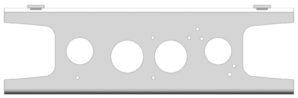
NOTES: [1] Curb weights reflect standard equipment and fuel, but no driver or payload.

[2] Payload weight is the allowed maximum for equipment, body, payload and driver and is calculated by subtracting chassis curb weight from the GVWR.

2026 Chevrolet Low Cab Forward

Frame and Crossmember Specifications





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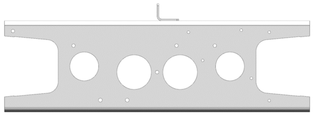

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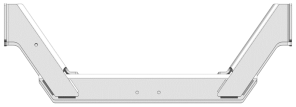

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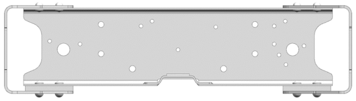

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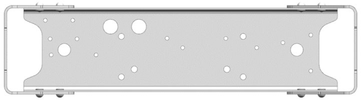


Type E-E

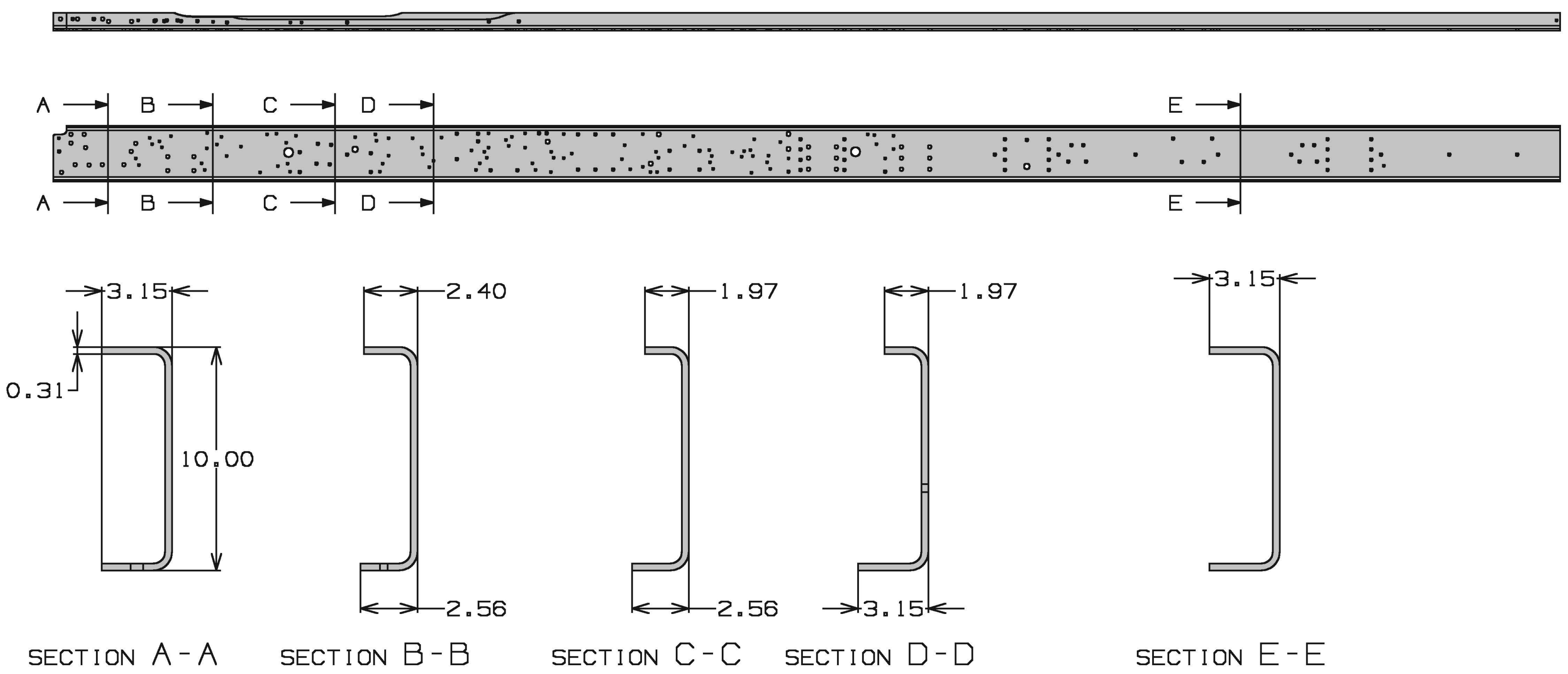
WHEEL BASE	OVERALL LENGTH	FRAME THICKNESS	CROSSMEMBER TYPE / LOCATION																					
			A		B		C		D		E		F		G			H			I		J	
																LEAF	AIR		LEAF	AIR				
152	270.5	0.31	A-A	50.2	B-B	35.6	C-C	16.3	D-D	87.0	-	-			E-E	28.3	18.4	E-E	29.6	27.5	-	-	-	65.9
170	297.6			50.2		35.6		16.3		87.0	E-E	58.1	-	-		28.3	18.4		29.6	27.5	E-E	63.1	-	75.0
188	324.6			50.2		35.6		16.3		87.0		76.1	-	-		28.3	18.4		29.6	27.5		72.1	-	84.0
200	342.5			50.2		35.6		16.3		87.0		81.2	-	-		28.3	18.4		29.6	27.5		78.0	-	89.9
212	360.6			50.2		35.6		16.3		87.0		100.1	E-E	68.4		28.3	18.4		29.6	27.5		84.1	-	96.0
224	378.5			50.2		35.6		16.3		87.0		112.1		68.4		28.3	18.4		29.6	27.5		90.0	-	101.9
236	396.7			50.2		35.6		16.3		87.0		124.1		83.2		28.3	18.4		29.6	27.5		96.1	-	108.0
248	414.6			50.2		35.6		16.3		87.0		136.1		83.2		28.3	18.4		29.6	27.5		102.0	-	113.9

NOTE: Dimensions in inches

NOTE: Air Suspension Measurement to Inside Trim Edge

2026 Chevrolet Low Cab Forward

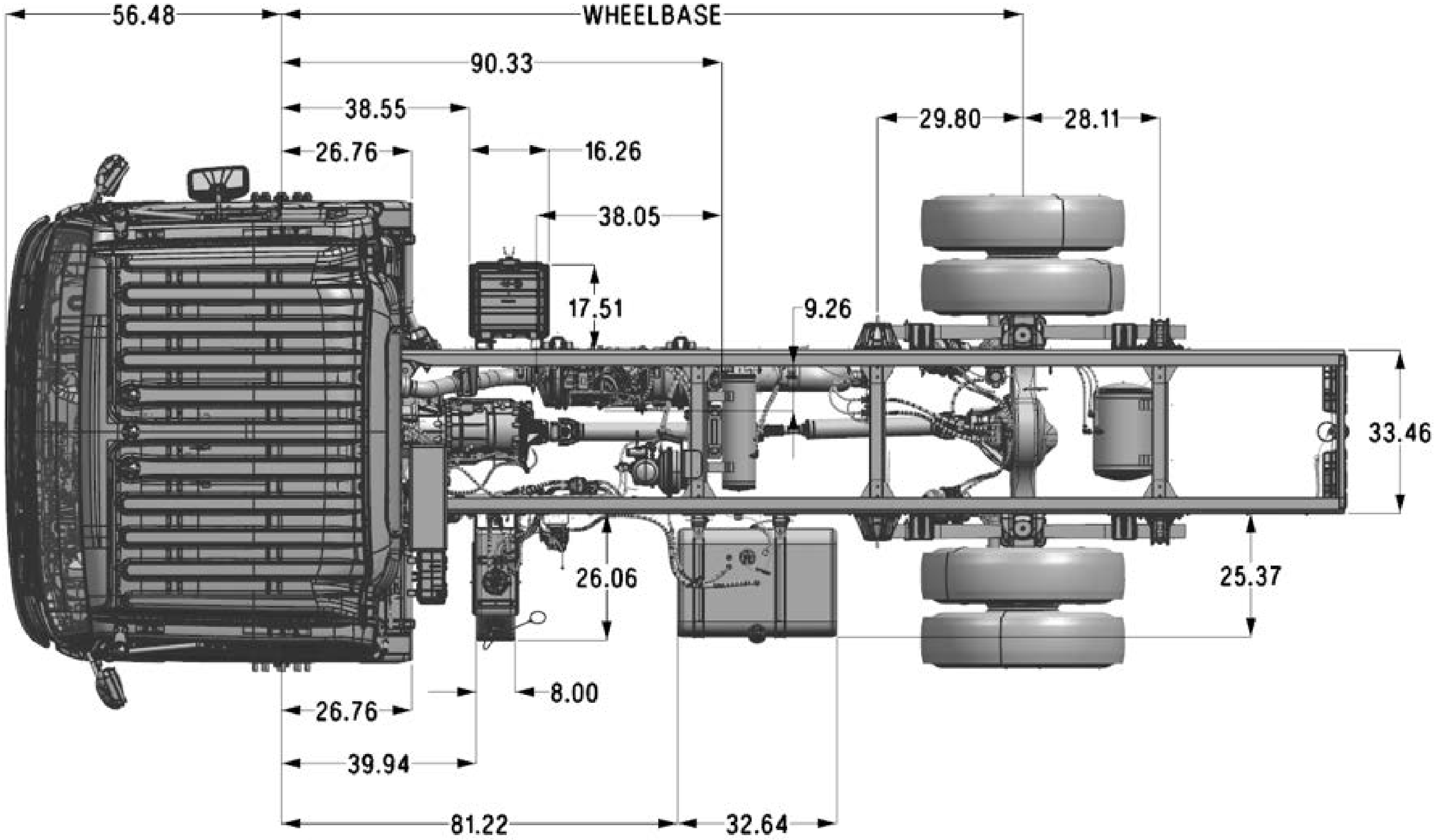
Frame Chart


A
B
C
D
E
3.15
0.31
10.00
2.40
2.56
1.97
2.56
1.97
3.15
3.15
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E

Wheelbase	Frame Length	Frame Thickness
152	270.5	0.315
170	297.6	0.315
188	324.6	0.315
200	342.5	0.315
212	360.6	0.315
224	378.5	0.315
236	396.7	0.315
248	414.6	0.315

Note: Dimensions in inches

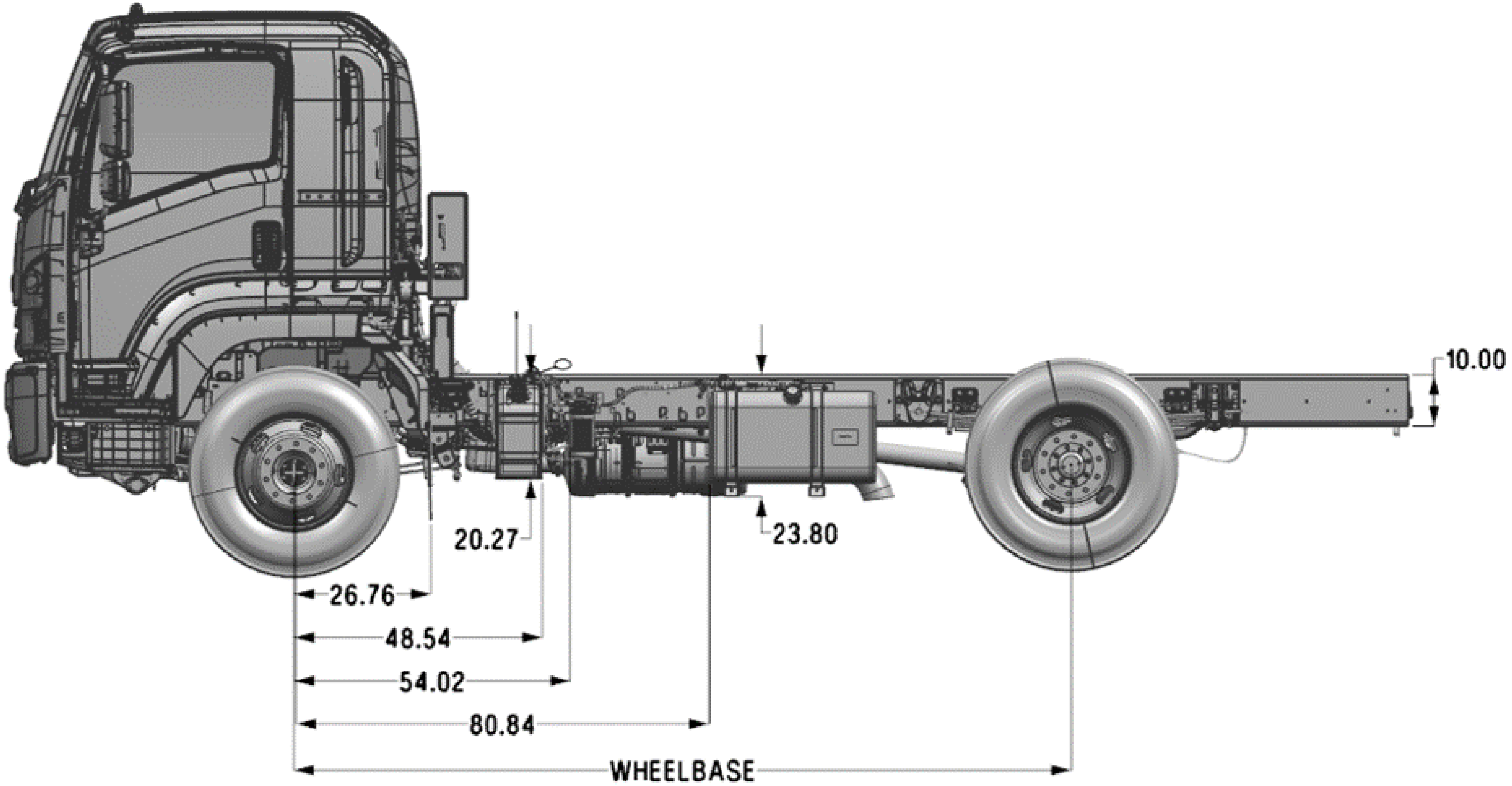
Diesel Multi-Leaf Spring Suspension - Top View


56.48
WHEELBASE
90.33
38.55
26.76
16.26
38.05
29.80
28.11
17.51
9.26
33.46
26.06
25.37
8.00
26.76
39.94
81.22
32.64

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

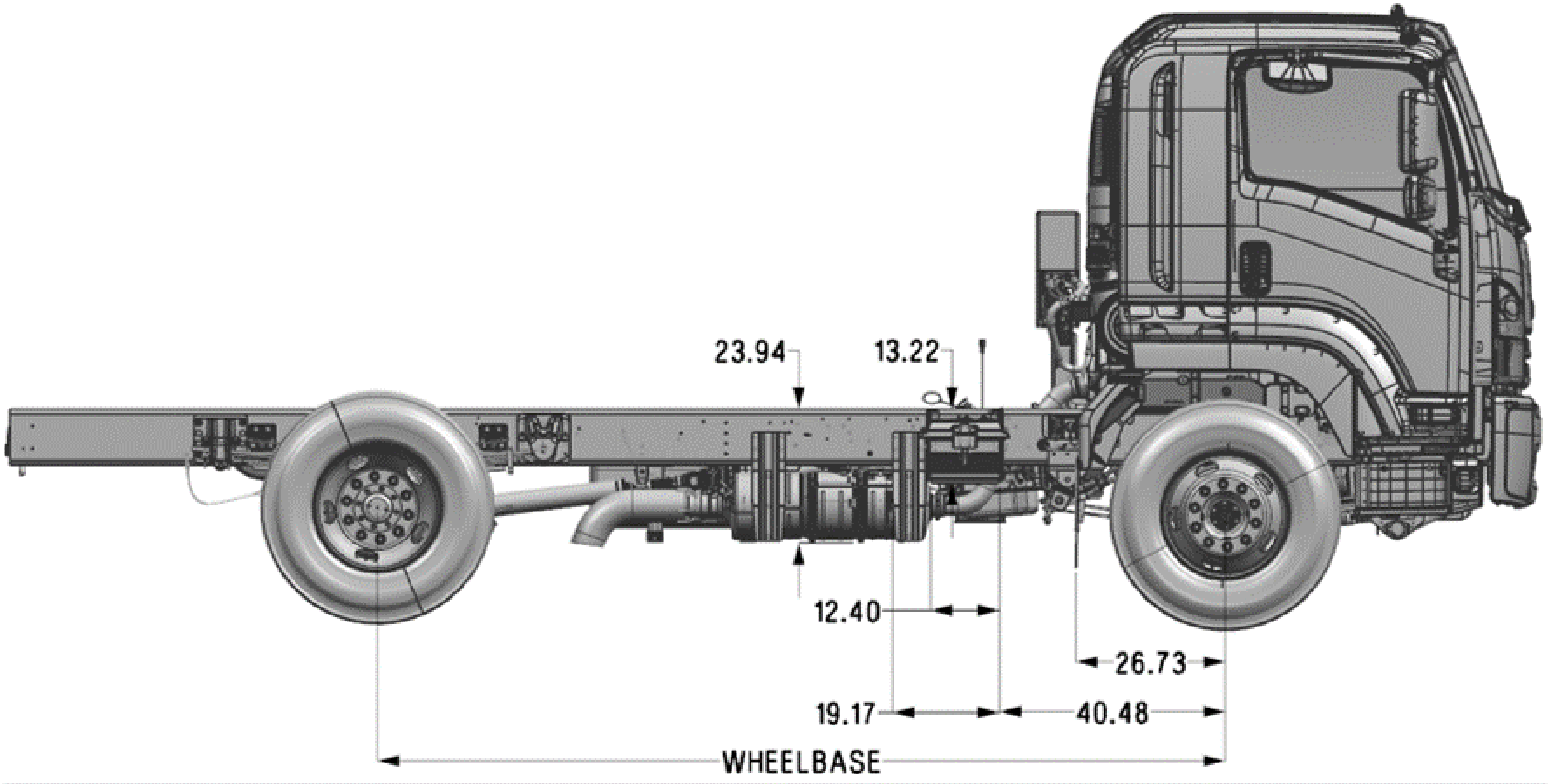
Diesel Multi-Leaf Spring Suspension - Left Side View


10.00
20.27
23.80
26.76
48.54
54.02
80.84
WHEELBASE

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

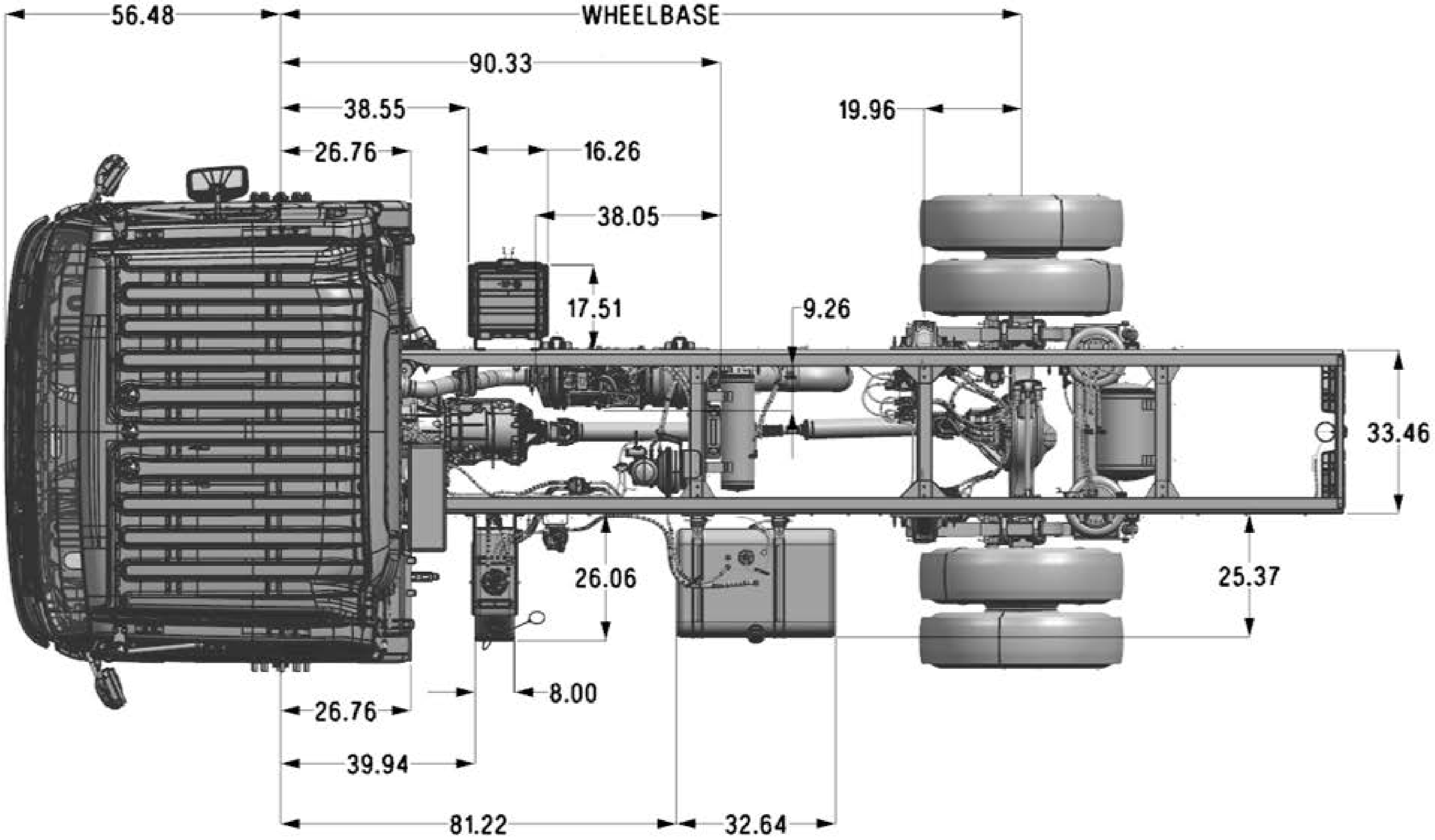
Diesel Multi-Leaf Spring Suspension - Right Side View


23.94
13.22
12.40
26.73
19.17
40.48
WHEELBASE

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

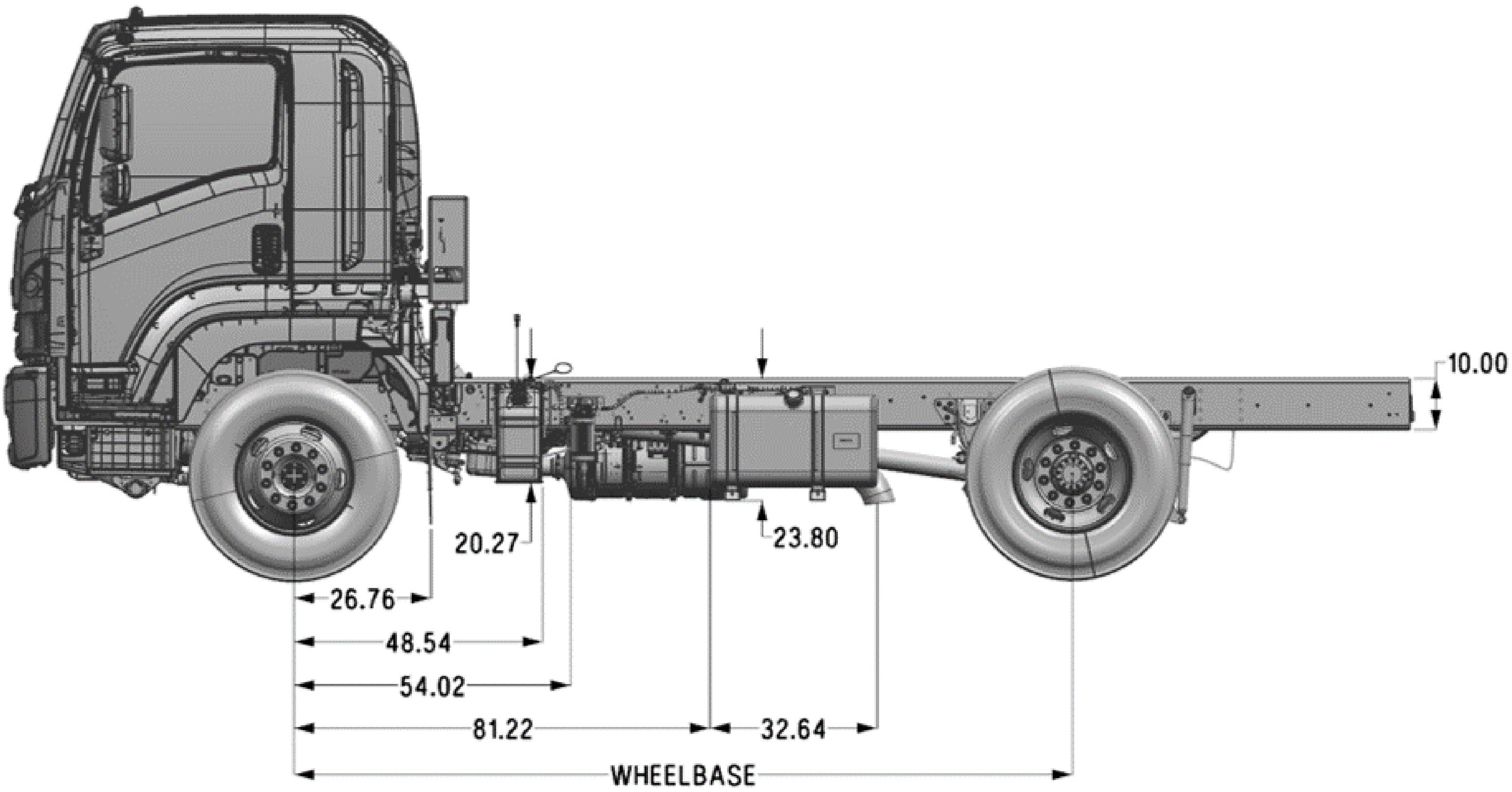
Diesel Air Spring Suspension - Top View


56.48
WHEELBASE
90.33
38.55
19.96
26.76
16.26
38.05
17.51
9.26
33.46
26.06
25.37
8.00
26.76
39.94
81.22
32.64

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

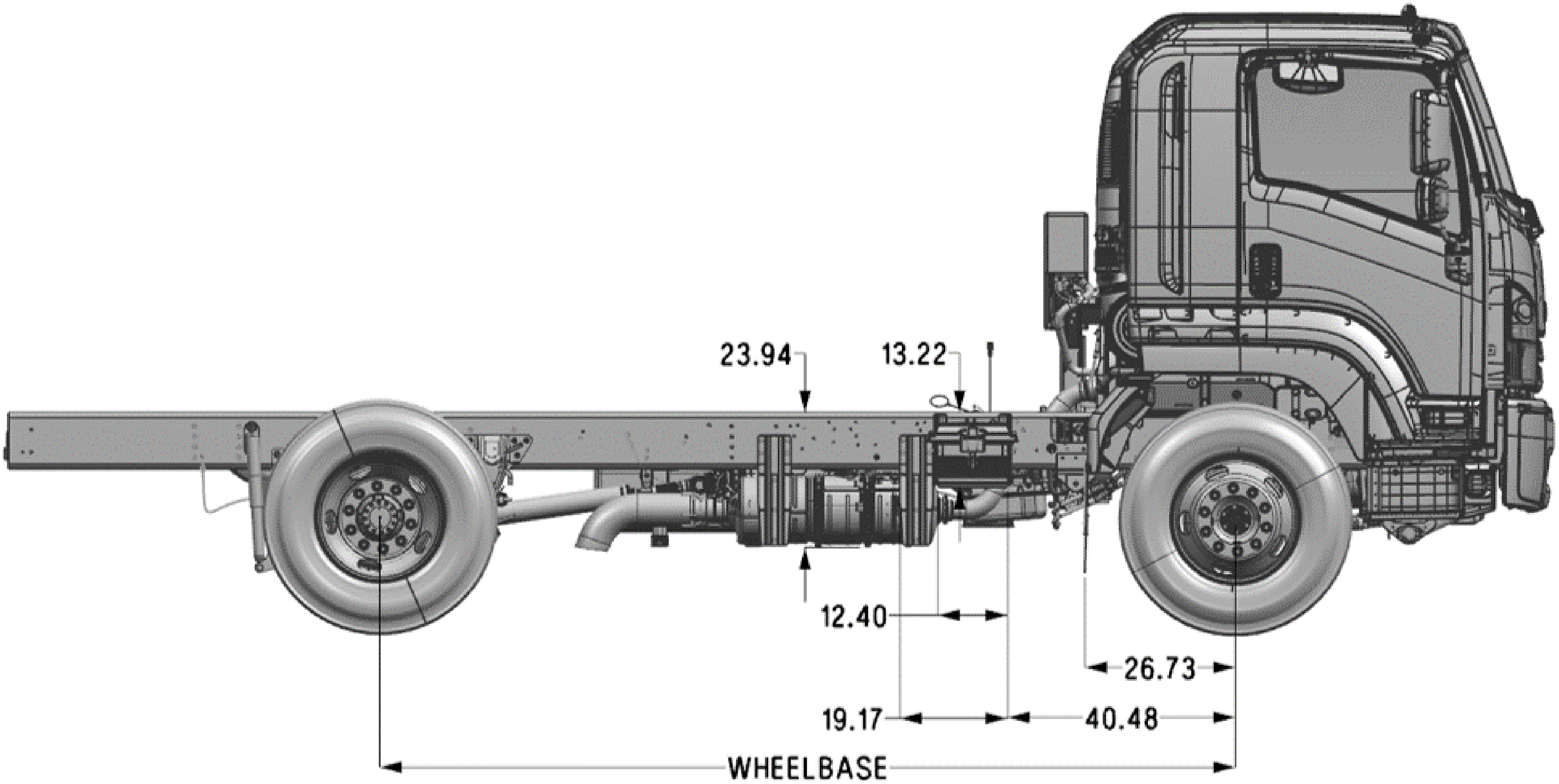
Diesel Air Spring Suspension - Driver Side View


10.00
20.27
23.80
26.76
48.54
54.02
81.22
32.64
WHEELBASE

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

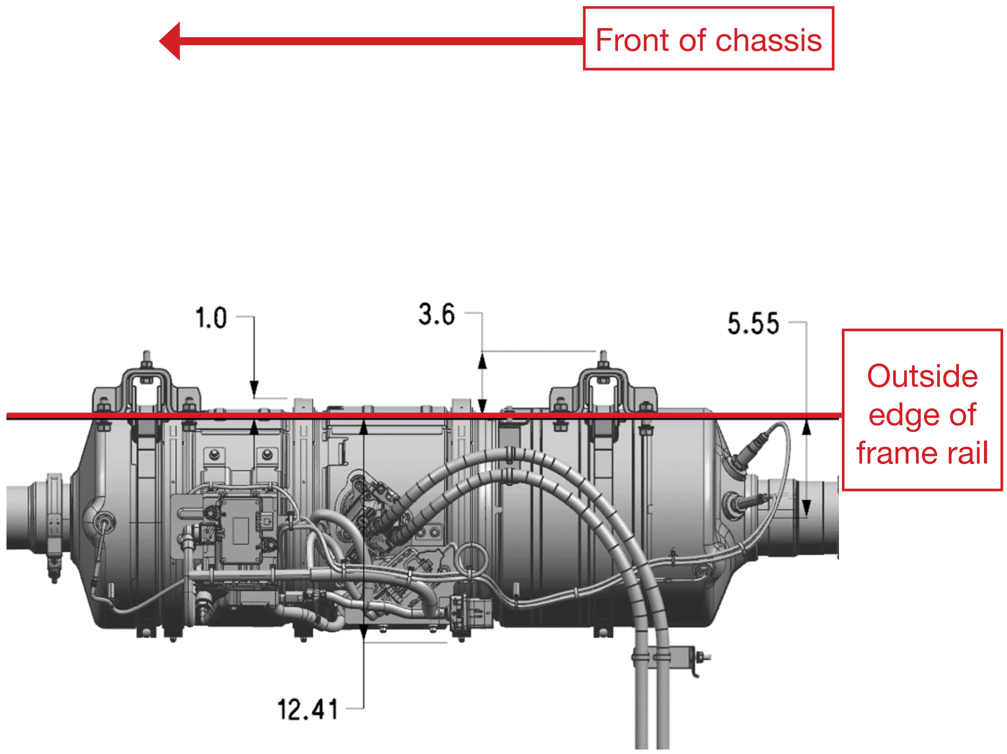
Diesel Air Spring Suspension - Passenger Side View


23.94
13.22
12.40
26.73
19.17
40.48
WHEELBASE

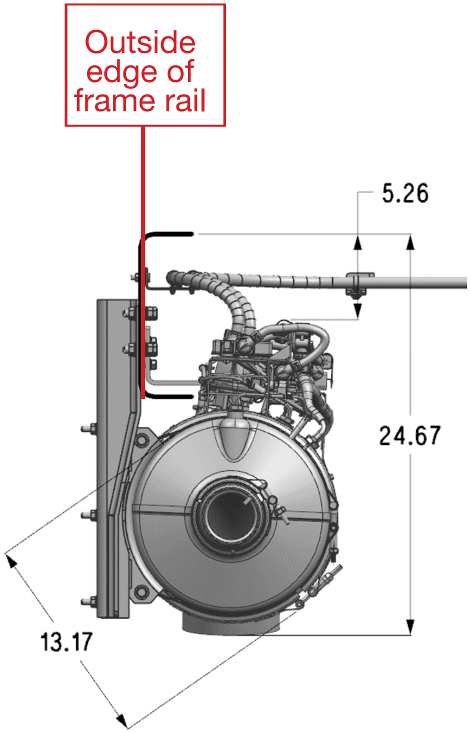
Note: Chassis shown with 255/70R22.5H tires

Note: Dimensions in inches

Exhaust System Dimensions
SCR / DPF 4HK1-TC


Front of chassis
1.0
3.6
5.55
Outside edge of frame rail
12.41

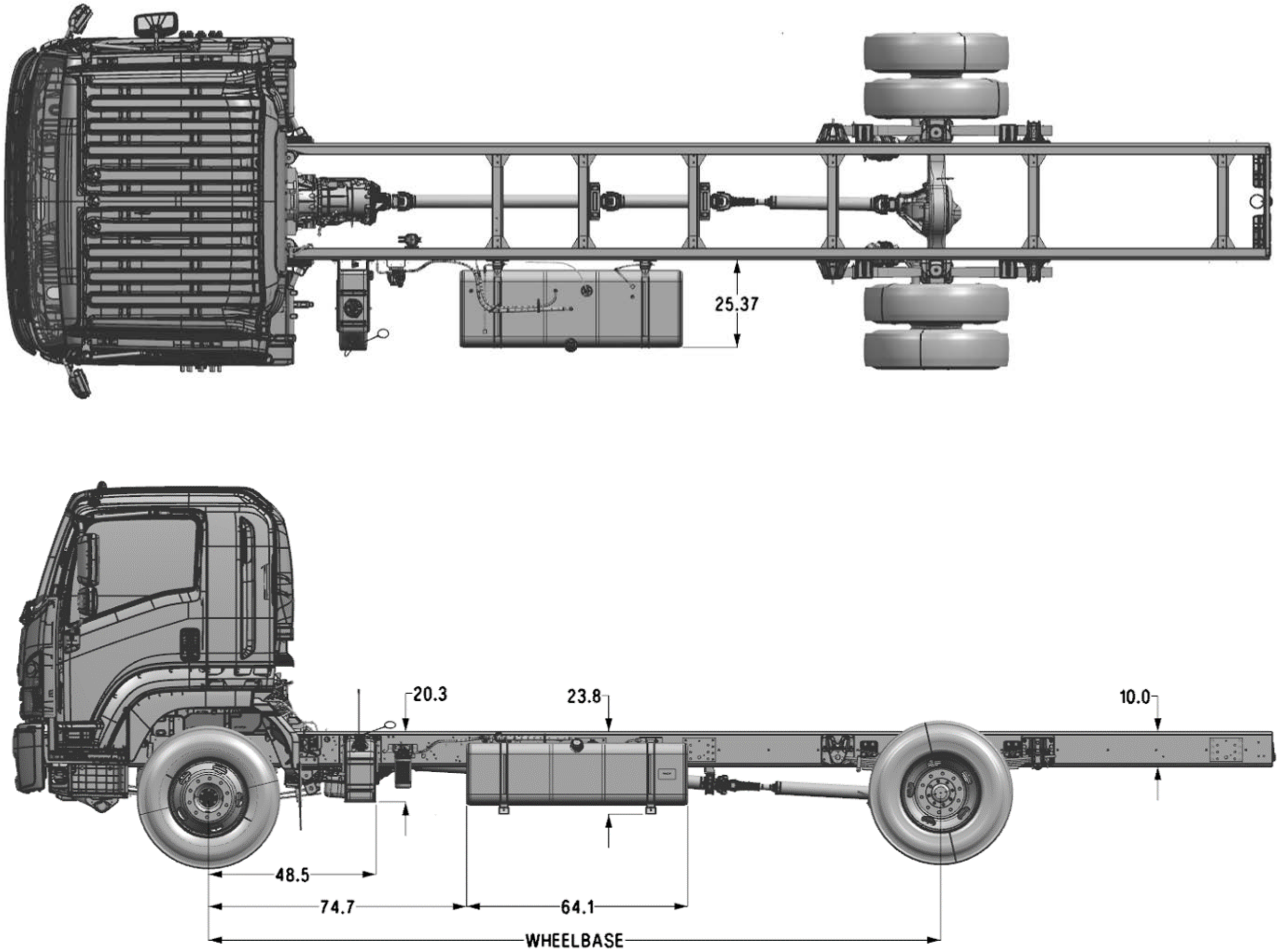
Note: As viewed from top


Outside edge of frame rail
5.26
24.67
13.17

Note: As viewed from front

Note: Dimensions in inches

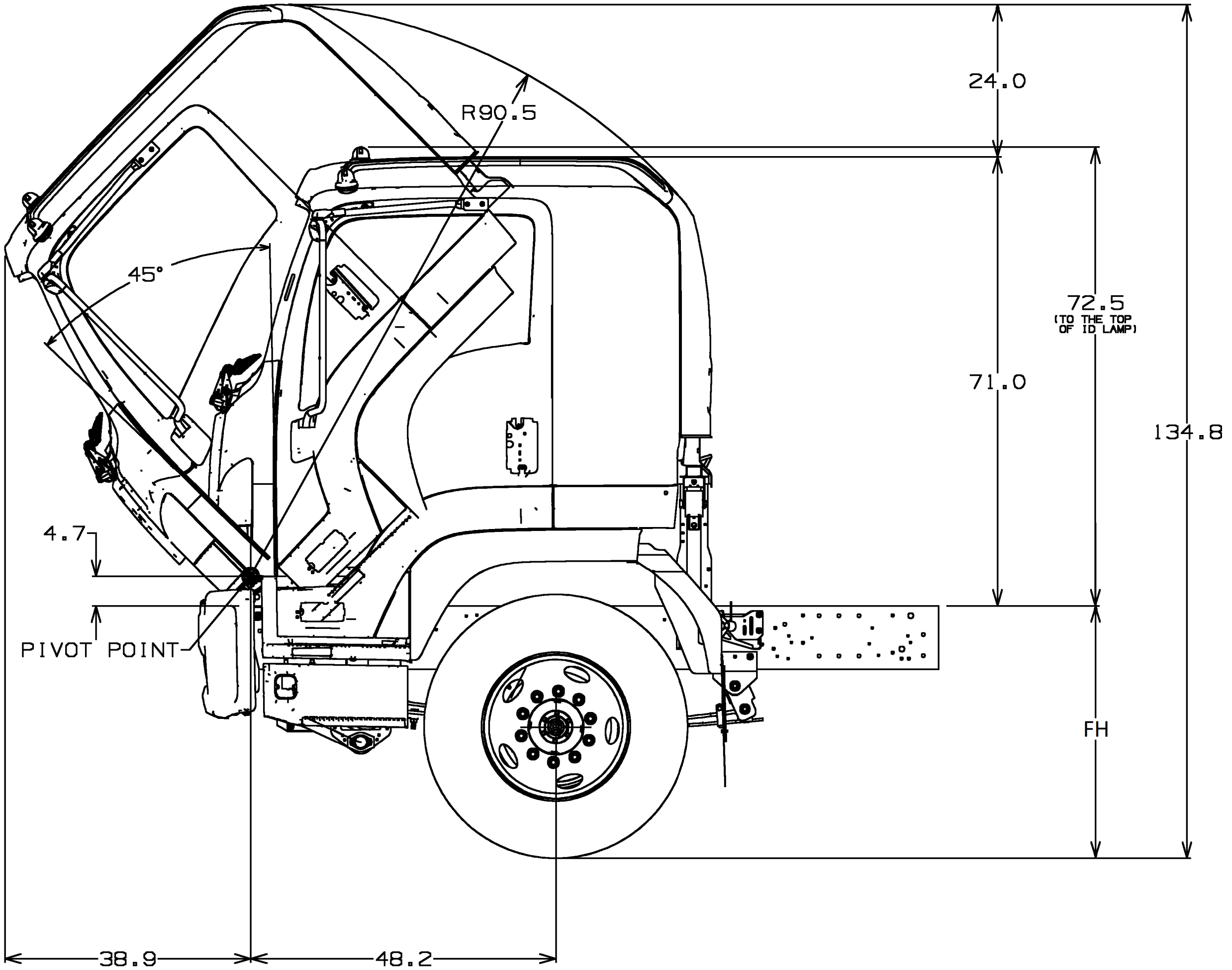
Fuel Tank Dimensions - 100 Gallon Tank


25.37
20.3
23.8
10.0
48.5
74.7
64.1
WHEELBASE

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

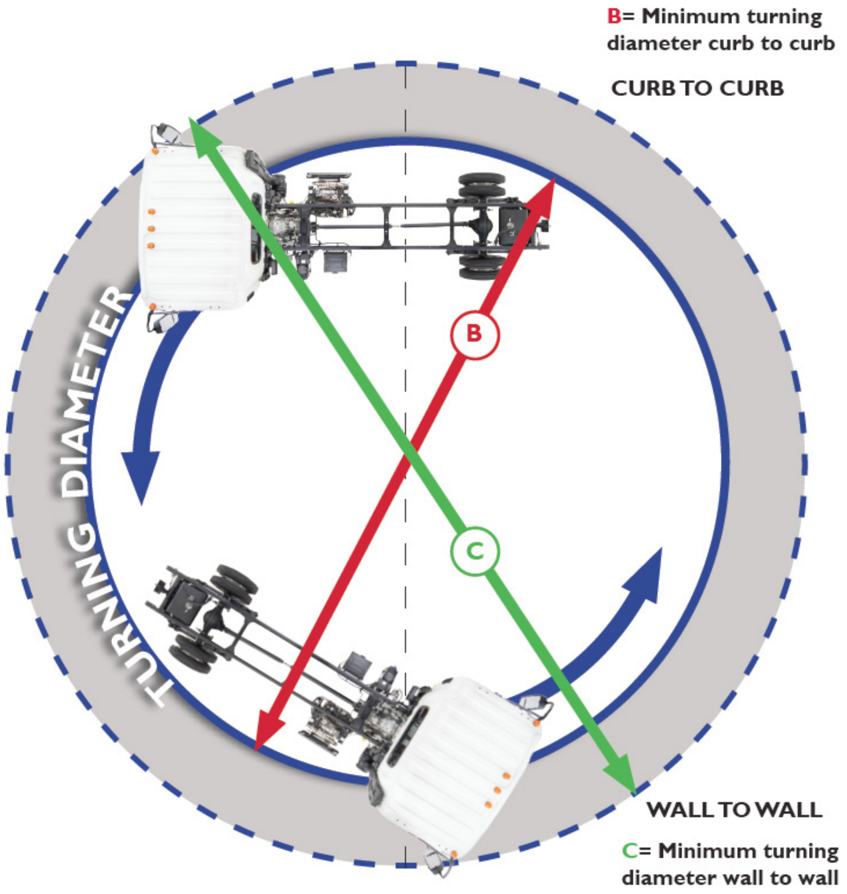
Cab Tilt


24.0
R90.5
45°
72.5
(TO THE TOP OF ID LAMP)
71.0
134.8
4.7
PIVOT POINT
FH
38.9
48.2

Note: Dimensions in inches

Turning Diameter

The 6500 XD / 7500 XD Diesel steering features a 50 degree inside wheel cut angle.


B= Minimum turning diameter curb to curb
CURB TO CURB
TURNING DIAMETER
B
C
WALL TO WALL
C= Minimum turning diameter wall to wall

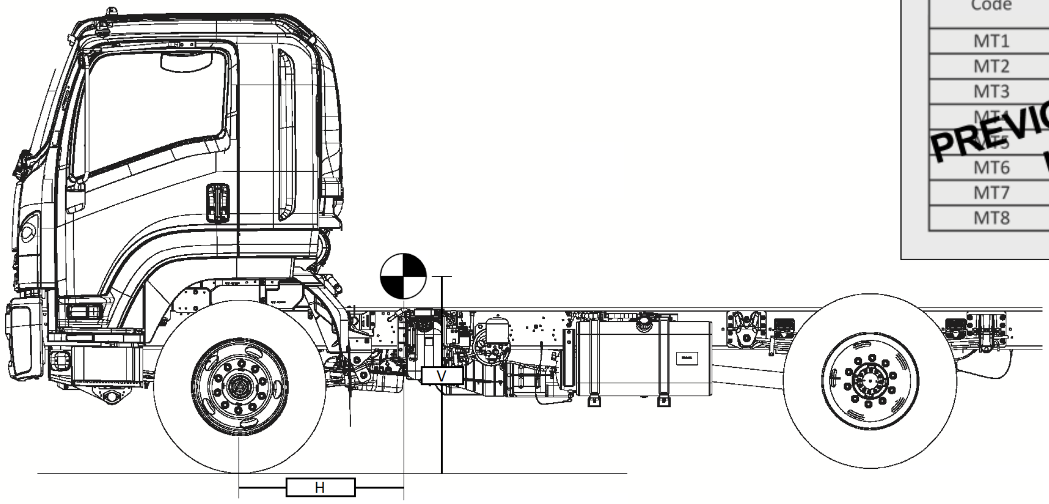
Wheelbase	in	152	170	188	200	212	224	236	248
Curb-to-Curb	ft	43.7	47.4	51.8	54.7	56.5	59.3	62.2	65.0
WALL-TO-WALL (Bumper)	ft	48.7	52.5	56.9	59.9	61.7	64.6	67.5	70.3
WALL-TO-WALL (96" Mirrors)	ft	48.6	52.5	56.9	59.8	61.6	64.5	67.3	70.2
WALL-TO-WALL (102" Mirrors)	ft	49.0	52.9	57.2	60.2	62.0	64.8	67.7	70.6

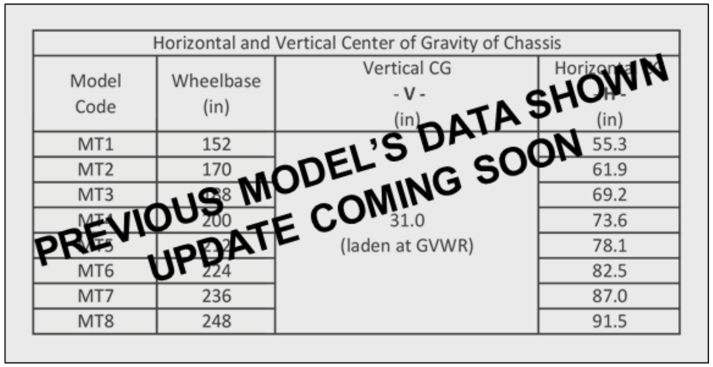
Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

Center of Gravity

PREVIOUS MODEL YEAR DATA SHOWN - UPDATE COMING SOON





Horizontal and Vertical Center of Gravity of Chassis			
Model Code	Wheelbase (in)	Vertical CG - V - (in)	Horizontal CG - H - (in)
MT1	152	31.0 (laden at GVWR)	55.3
MT2	170		61.9
MT3	188		69.2
MT4	200		73.6
MT5	212		78.1
MT6	224		82.5
MT7	236		87.0
MT8	248		91.5

PREVIOUS MODEL'S DATA SHOWN
UPDATE COMING SOON

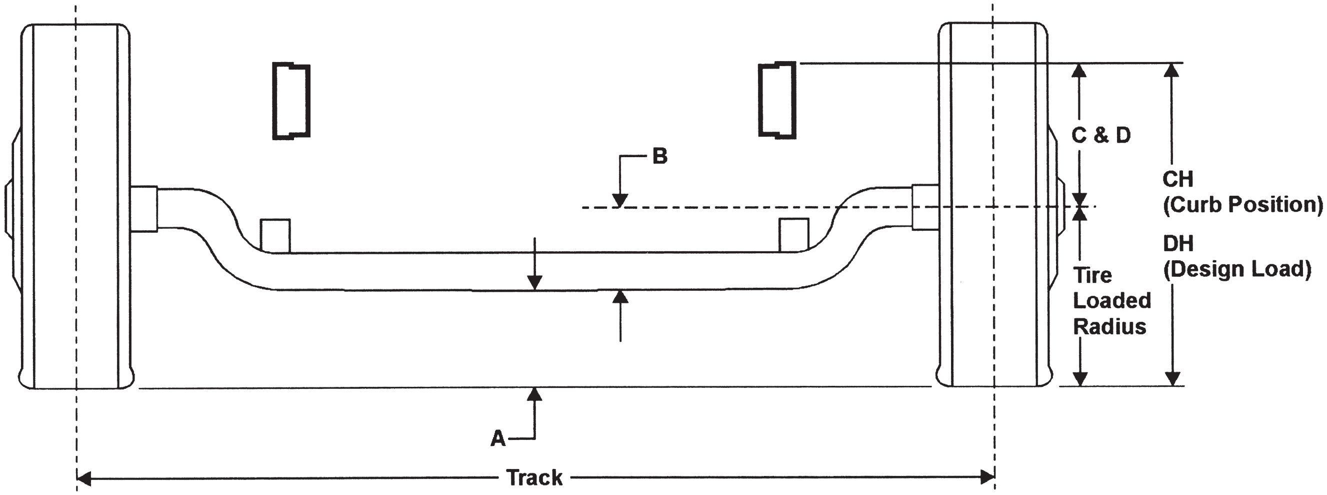
NOTE: The Final Manufacturer must ensure that the combined vertical center of gravity of the chassis, body, and available payload at full GVW does not exceed the maximum vertical center of gravity outlined in the IVD.

The maximum vertical center of gravity of the total vehicle at maximum GVWR is not to exceed 70 inches (1778 mm) above the ground. If a higher completed vehicle vertical center of gravity is required, please contact GM Upfitter Integration Team at www.gmupfitter.com

Note: Dimensions in inches

2026 Chevrolet Low Cab Forward

Front Axle Chart


C & D
B
CH
(Curb Position)
DH
(Design Load)
Tire
Loaded
Radius
A
Track

Formulas for calculating height dimensions:

A = Tire Loaded Radius – B
C = Centerline of Axle to Top of Frame Rail at Curb Position
D = Centerline of Axle to Top of Frame Rail at Design Load
CH = C + Tire Unloaded Radius
DH = D + Tire Loaded Radius

TIRE	GVWR	GAWR	A	B	C	D	CH	DH	TRACK
11R22.5G	25,950 lb.	12,000 lb.	10.0	9.4	20.0	18.6	40.8	38.0	81.4
255/70R22.5H	25,950 lb.	11,000 lb.	7.7	9.4	20.0	18.6	38.3	35.7	81.4
11R22.5G	33,000 lb.	12,000 lb.	10.0	9.4	20.0	18.6	40.8	38.0	81.4

Note: Dimensions in inches

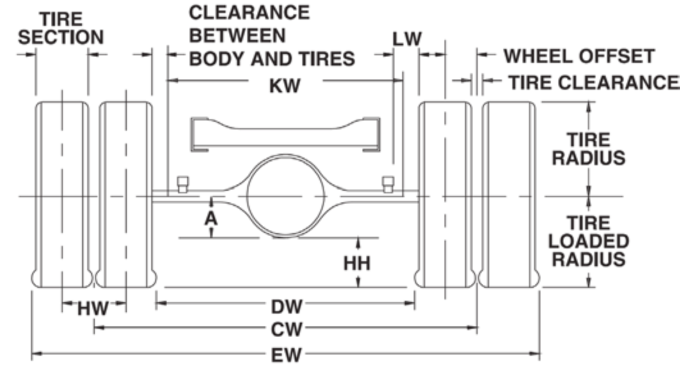
Rear Axle Chart

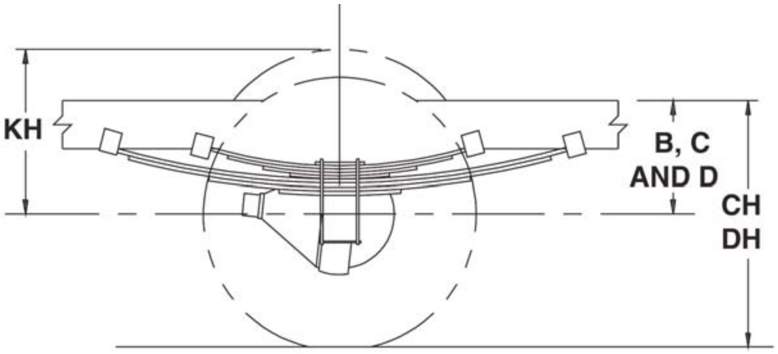
Definitions	
A	Centerline of axle to bottom of axle bowl.
B	Centerline of axle to top of frame rail at metal-to-metal position.
C	Centerline of axle to top of frame rail at curb position.
D	Centerline of axle to top of frame rail at design load.
E	Rear Tire Clearance: Minimum clearance required for tires measured from the top of the frame at the vehicle centerline of the rear axle, when rear wheels on one side ride over a high spot.
CH	Rear Frame Height (Curb Load): Vertical distance between the normal top of frame rail and the ground-line through the centerline of the rear axle at curb position.
DH	Rear Frame Height (Design Load): Vertical distance between the normal top of frame rail and the ground-line through the centerline of the rear axle at design position.
DW	Minimum distance between the inner surfaces of the rear tires.
EW	Minimum Rear Width: Overall width of the vehicle measured at the outermost surfaces of the rear tires.
HH	Rear Tire Clearance: Minimum clearance between the rear axle and the ground-line.
HW	Dual Tire Spacing: Distance between the centerlines of the tires in a set of dual tires.
KH	Tire Bounce Clearance: Minimum distance required for tire bounce as measured from the centerline of the rear axle and the top of the rear tire when one wheel rides over a high spot.
CW	Track Dual Rear Wheel Vehicle: Distance between the centerlines of the dual wheels measured at the ground-line.
KW	Clearance between body and tires.
Equations	
CH	= Tire loaded radius + C
DH	= Tire loaded radius + D
DW	= CW + 2 tire sections - tire clearance
EW	= CW + 2 tire sections + tire clearance
HH	= Tire loaded radius - A
JH	= KH - B
KH	= Tire radius + 3.0 inches
KW	= DW - 5.0 inches
LW	= 1.0 inch minimum clearance between tires and springs

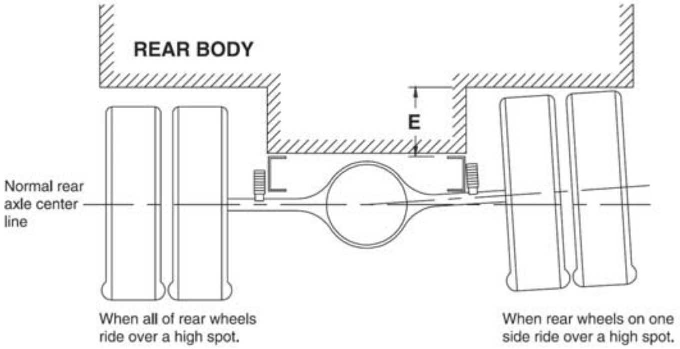
SUSPENSION TYPE	TIRE SIZE	CW	A	B	C	D	E[1]
MULTI-LEAF	11R22.5G	72.1	8.1	13.8	20.8	17.9	11.4
	255/70R22.5H						10.8
AIR SPRING	11R22.5G			15.7	18.6	18.6	5.0
	255/70R22.5H						3.2

Notes:

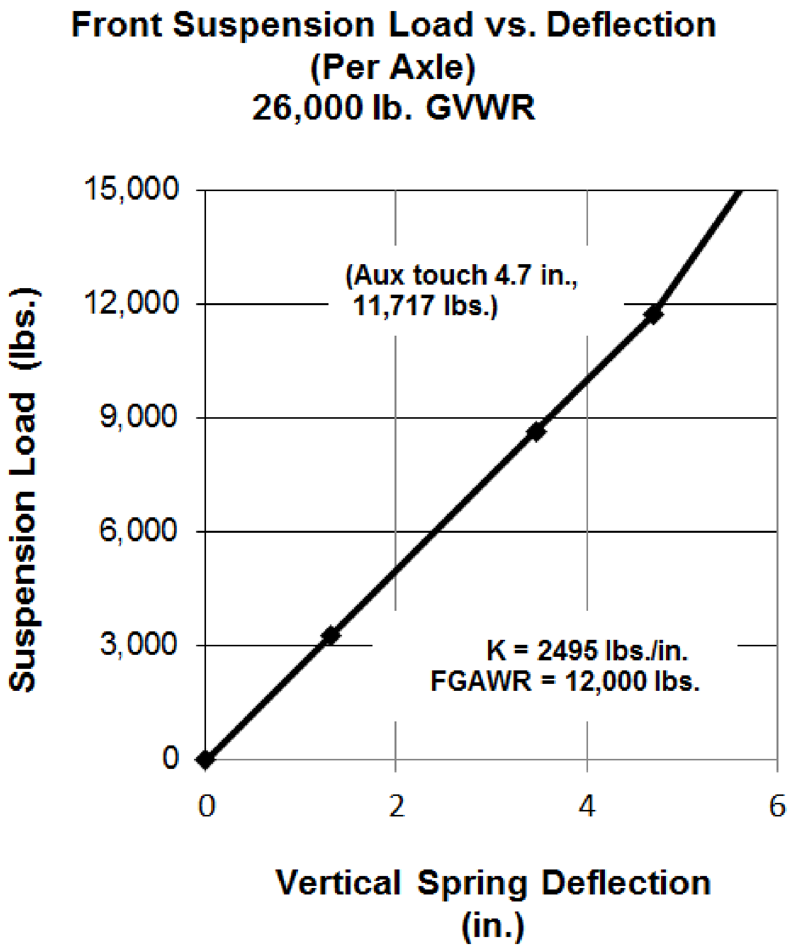
[1] Includes 2.5" of tire chain clearance

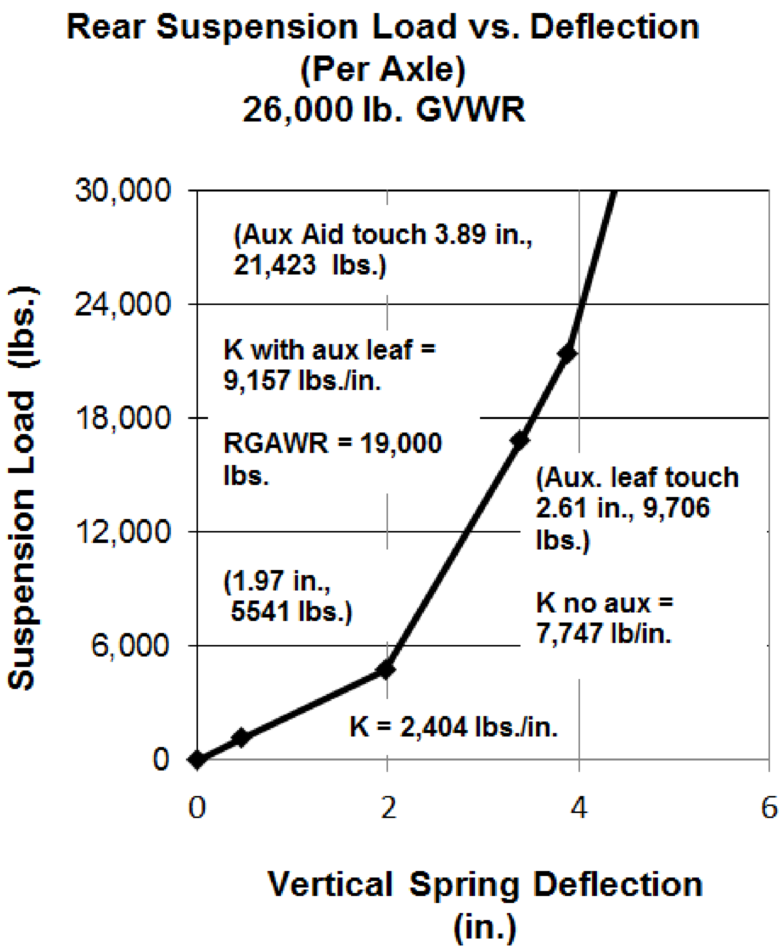

TIRE SECTION
CLEARANCE BETWEEN BODY AND TIRES
KW
LW
WHEEL OFFSET
TIRE CLEARANCE
TIRE RADIUS
A
TIRE LOADED RADIUS
HH
HW
DW
CW
EW


KH
B, C AND D
CH
DH


REAR BODY
E
Normal rear axle center line
When all of rear wheels ride over a high spot.
When rear wheels on one side ride over a high spot.

Multi-leaf Spring Suspension Deflection Charts

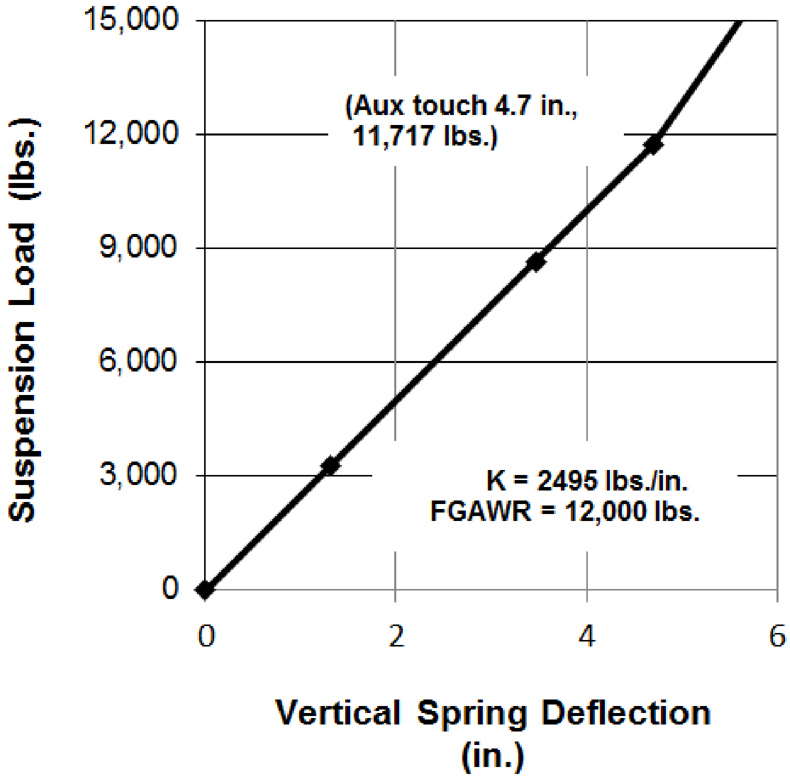




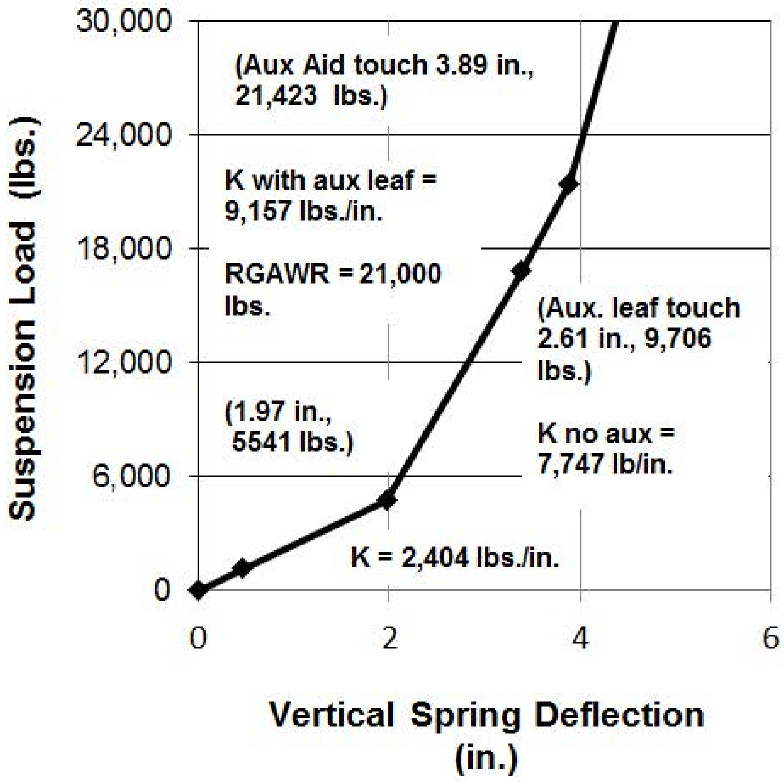
2026 Chevrolet Low Cab Forward

Multi-leaf Spring Suspension Deflection Charts

Front Suspension Load vs. Deflection (Per Axle) 33,000 lb. GVWR



Rear Suspension Load vs. Deflection (Per Axle) 33,000 lb. GVWR



Tire and Disc Wheel Chart

Tire

Brand	Size	Revolutions Per Mile	Max Load Per Tire (lb)		Cold Inflation Pressure (psi)	GVWR (lb)	Radius (in)		Loaded Section Width (in)	Tire Clearance (in)	Design Rim Width (in)
			Single	Dual			Loaded	Unloaded			
Bridgestone	11R22.5G	500	6175	5840	105	25,950	19.4	20.8	12.3	0.92	8.25
Continental	11R22.5G	498	6175	5840	105	25,950	19.4	20.8	12.0	0.20	8.25
Yokohama RY023 (Front Tire)	255/70R22.5	570	5510	5070	120	25,950[1]	17.1	18.25	10	2.83	7.5
Yokohama TY303 (Drive Tire)	255/70R22.5	563	5510	5070	120	25,950	17.3	18.5	10	2.83	7.5

Disc Wheel

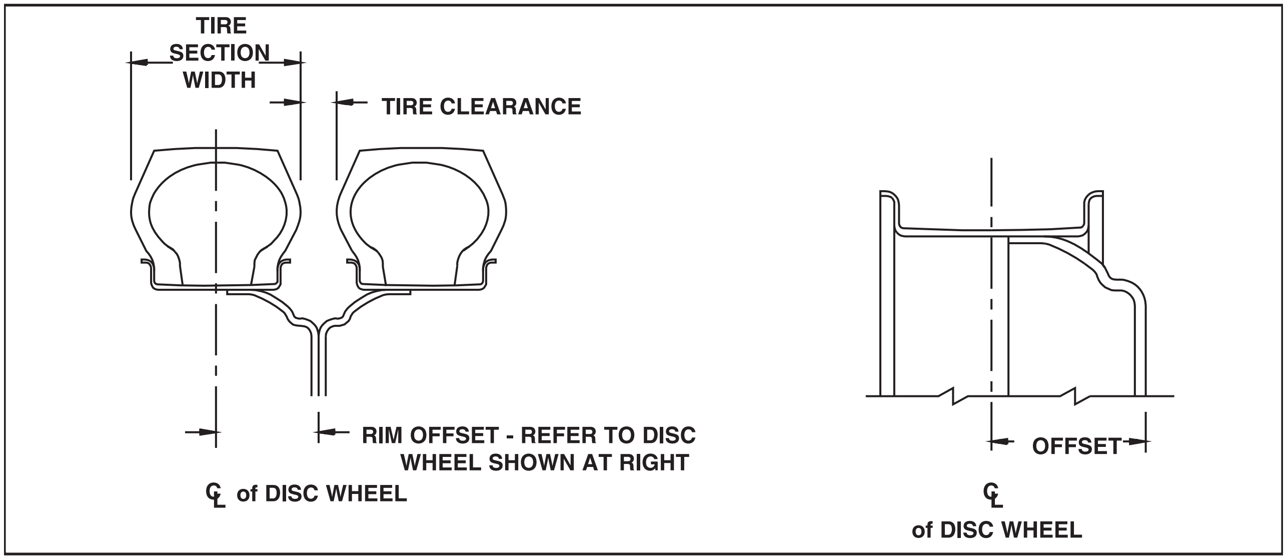
Brand	Size (in.)	Material	Rim Type	Bolt Holes	Bolt Circle Diameter (in)	Front & Rear Nut Size[2]	Front & Rear Stud Size	Nut/Stud Torque Specs (ft-lb)	Inner Circle (in)	Wheel Outside Offset (in)	Disc Thickness (in)
Accuride	22.5 x 8.25	2-piece welded steel	Hub-piloted, dual-mounting, 15º tubeless	10-Hole	11.25	33mm Hex	M22 x 1.5	475 (644 N-m)	8.66	6.60	0.437
Alcoa[3]	22.5 x 8.25	1-piece aluminum	Hub-piloted, dual-mounting, 15º tubeless	10-Hole	11.25	33mm Hex	M22 x 1.5	475 (644 N-m)	8.66	6.60	0.748

NOTES:

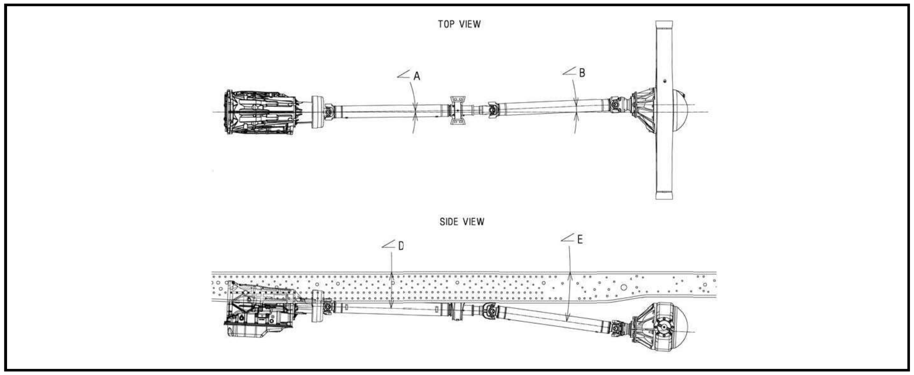
[1] Front GAWR is reduced to 11,000 lb. with 255/70R22.5H tires equipped.

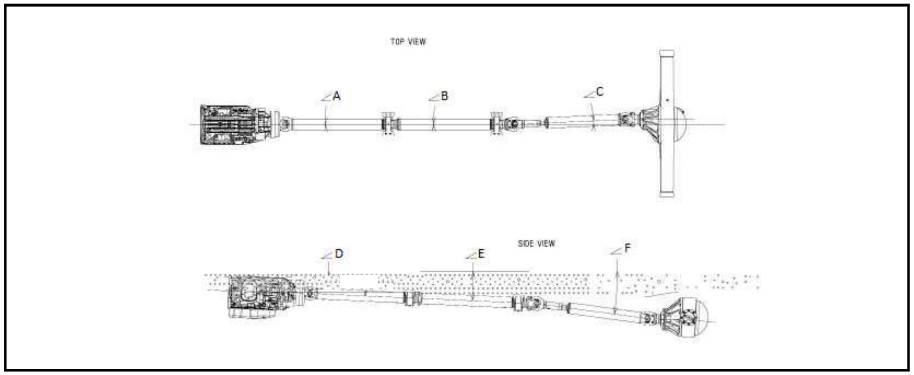
[2] Outside dimension wrench size

[3] Aluminum wheel options will include (4) wheel spacers to prevent dissimilar metal corrosion



Propeller Shaft Angles



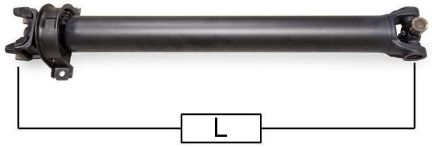
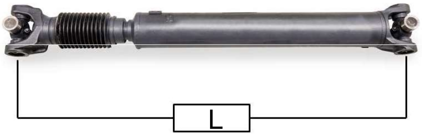


Wheel Base (in.)	Top View			Side View				
	∠A	∠B	∠C	∠D	∠E	∠F	∠Trans.	∠Rear Axle
152	0	1.7	n/a	5.52	8.89	n/a	4	5.42
170	0	1.2	n/a	5.52	6.30	n/a	4	5.42
188	0	1.4	n/a	5.85	4.24	n/a	4	5.42
200	0	0	0.8	5.52	3.87	4.97	4	5.42
212	0	0	1.0	3.24	4.94	4.96	4	5.42
224	0	0	0.8	3.24	4.93	3.61	4	5.42
236	0	0	0.7	3.24	3.76	3.84	4	5.42
248	0	0	0.7	3.24	4.49	2.13	4	5.42

Note: 1. Angles provided in table are relative to the frame angle. Please take this into consideration for service measurements.
2. Driveline angles are based on the chassis curb weight which includes standard fuel but no driver, body, or payload.

Propeller Shaft Lengths

Wheelbase	152	170	188	200	212	224	236	248
No. of Shafts	2	2	2	3	3	3	3	3
Shaft #1 O.D.	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Thickness	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Length	35.4	35.4	60.5	35.4	60.3	60.3	60.3	60.3
Type	A	A	A	A	A	A	A	A
Shaft #2 O.D.	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Thickness	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Length	44.1	62.0	54.8	31.8	31.9	43.8	41.1	53.0
Type	B	B	B	A	A	A	A	A
Shaft #3 O.D.	N/A	N/A	N/A	4.00	4.00	4.00	4.00	4.00
Thickness	N/A	N/A	N/A	0.095	0.095	0.095	0.095	0.095
Length	N/A	N/A	N/A	60.0	47.1	47.2	61.8	61.9
Type	N/A	N/A	N/A	B	B	B	B	B

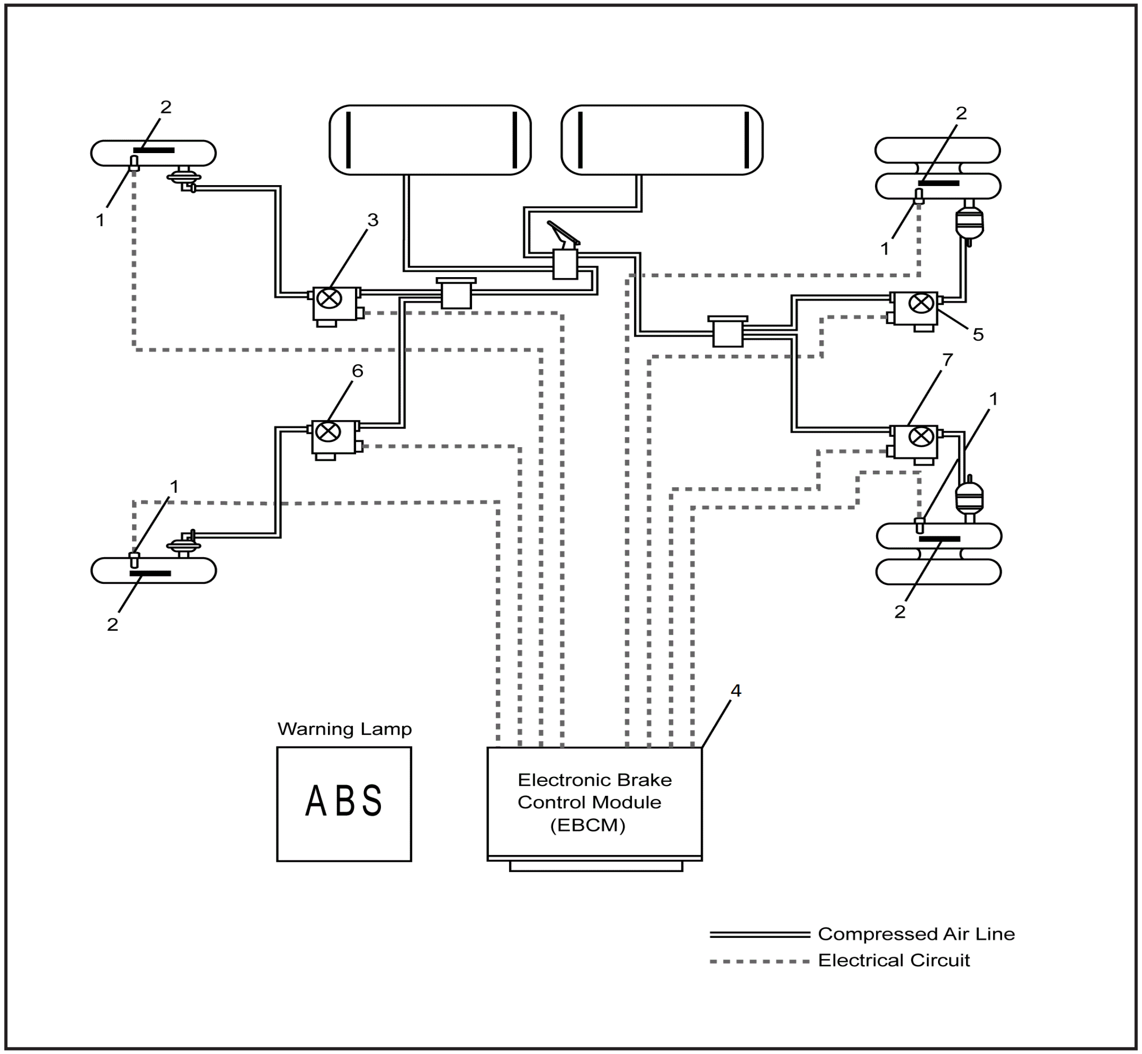
Type	Description	Illustration
Type **A**	1st shaft in 2 or 3-Piece Driveline 2nd shaft in 3-Piece Driveline	
Type **B**	2nd shaft in 2-piece Driveline 3rd shaft in 3-Piece Driveline	

Note: Dimensions in inches

Brake System Diagram

Legend 6500 XD Brake System

(1) Wheel Speed Sensors (WSS)
(2) Speed Sensor Rotor
(3) Right Front Brake Pressure Modulator Valve
(4) Electronic Brake Control Module (EBCM)
(5) Right Rear Brake Pressure Modulator Valve
(6) Left Front Brake Pressure Modulator Valve
(7) Left Rear Brake Pressure Modulator Valve


2
1
3
2
1
5
6
7
1
1
2
2
4
Warning Lamp
ABS
Electronic Brake
Control Module
(EBCM)
Compressed Air Line
Electrical Circuit

4500 XD & 5500 XD - Diesel In-Frame Diesel Fuel Fill Installation Instructions

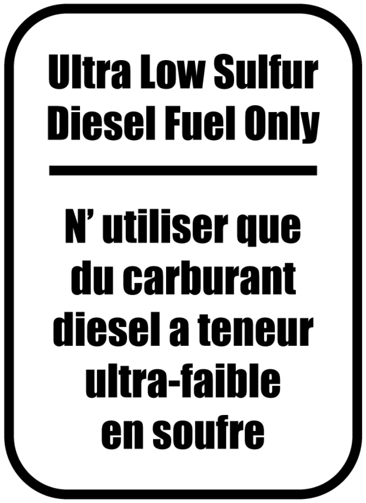
1. Disconnect battery.
2. Loosen hose from the tie downs. Remove caps from plate on rail.
3. Install hoses onto the plate.
4. Extend hose out from the driver side of the rail to body rail.
5. The filler neck must be mounted to allow the fill plate bracket to be parallel to the frame horizontal.
6. Cover with protector wrap and secure with tie wraps.
7. Filler hose is set for 102 inches outside width body.
8. Filler neck (Figure 9 or 14 - Dimension A) must be between 6.85 inches and 8.5 inches above frame.
9. Secure the filler plate to the bottom of the body and check for leaks.
10. Ensure that fill hose does not sag, creating an area where the fuel could pool in the fill hose.
11. Reconnect battery.

Fuel Tank Cautions

1. **Fuel fill kit must be installed on cab chassis if it will be driven for an extended distance.**
2. **Fuel tank kit provides venting for the fuel tank.**
3. **DO NOT RESTRICT OR KINK THE FUEL TANK VENT HOSE. Operating this vehicle with a restricted or kinked fuel tank vent hose may cause serious damage to the fuel tank and/or fuel injection pump. Continued operation may cause engine failure.**

4500 XD & 5500 XD - *Diesel Ultra Low Sulfur Diesel Label*

Per EPA Title 40, Part 86, 86:007—35(c),
The decal illustrated below must be installed on the vehicle.
The decal is included in the fuel fill parts box.


Ultra Low Sulfur
Diesel Fuel Only
N' utiliser que
du carburant
diesel a teneur
ultra-faible
en soufre

INSTRUCTIONS FOR DECAL PLACEMENT:

1. The decal must be placed as close as possible to the fuel inlet and be **clearly visible.**
2. The decal should be placed above or to the side of the fuel cap to avoid corrosion by possible contact with fuel.
3. The decal may be placed on aerodynamic fairings, bodies, etc. as long as the decal is clearly visible and in close proximity to the fuel inlet.
4. For installed bodies that have a fuel door , the decal should be placed above or to the side of the fuel door.

Thoroughly clean the area of all grease, dirt, etc. before application of the decal. Apply the decal at room temperature, 65° to 75° F.

Figure 1

4500 XD & 5500 XD- Diesel Through the Rail Fuel Fill Frame Hole

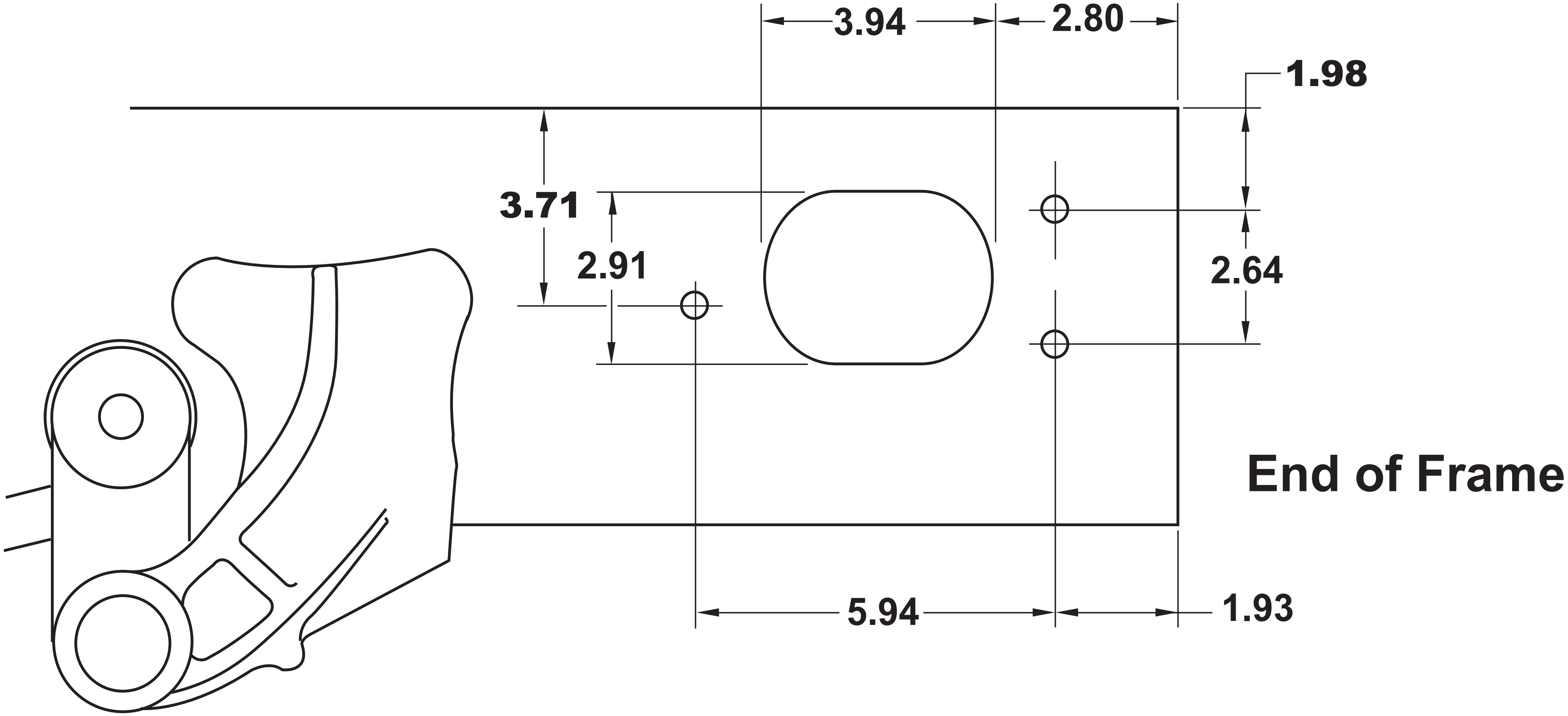

3.94
2.80
1.98
3.71
2.91
2.64
End of Frame
5.94
1.93

Figure 2

Note: Dimensions in inches

4500 XD & 5500 XD - Series Diesel Installation Instructions and Considerations

The fuel tank shutter valve was a new component for 2011 model year. This component is meant to improve fuel splash-back performance of the fuel system. In the 2012 model year a running change was made and this valve was relocated from the fuel tank inlet to the inlet (outboard side) of the fuel filler neck bulkhead assemble that is bolted to the left hand frame rail as shown in Figure 3. This plastic valve snaps into place in the inlet of the frame mounted fuel pipe. The valve should be installed so that the plastic clip is at the top of the valve, so that the flap door opens up, as shown in Figure 4.

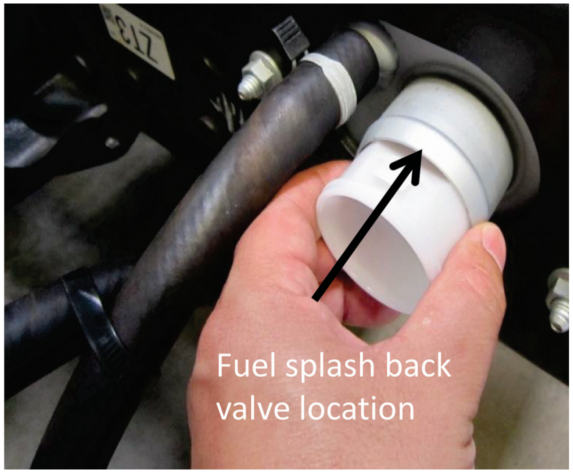

Fuel splash back
valve location

Figure 3

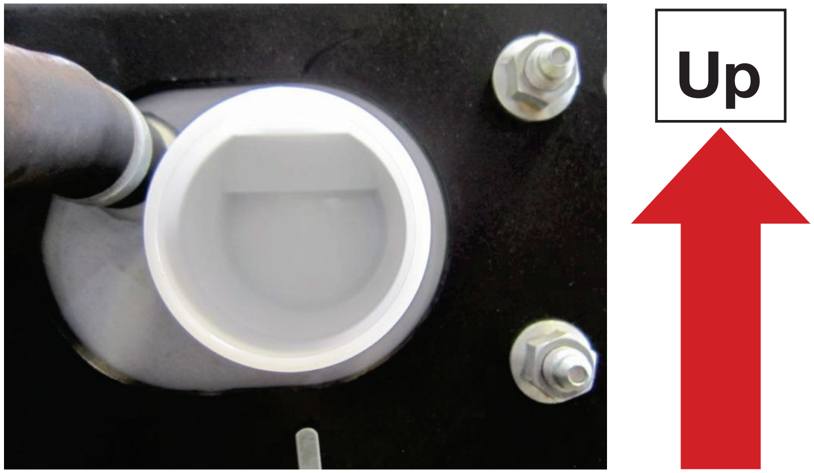


Figure 4

The fuel filler hose should be installed flush against the tank. The clamp should be installed between 1/16” and 3/8” from the tank. As shown in Figure 10 below.

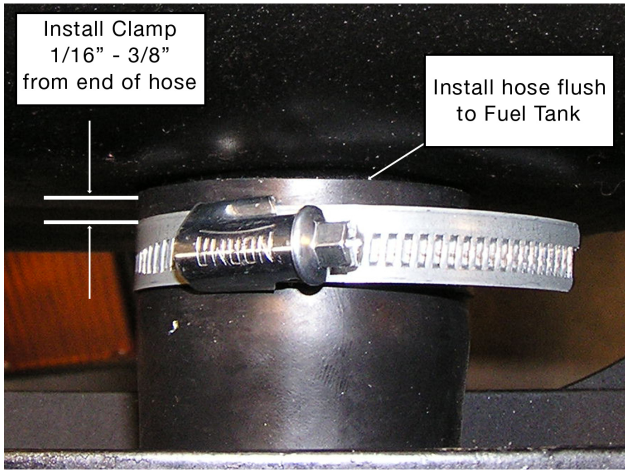

Install Clamp
1/16” - 3/8”
from end of hose
Install hose flush
to Fuel Tank

Figure 5

4500 XD & 5500 XD Diesel Roll-Over Valve Tubing

The roll-over valve has a hose attachment that will make this valve less sensitive to water intrusion. In order for the valve to work properly, it is critical for the hose to be installed to the rollover valve. The proper assembly of the outer hose is shown below in Figure 6.

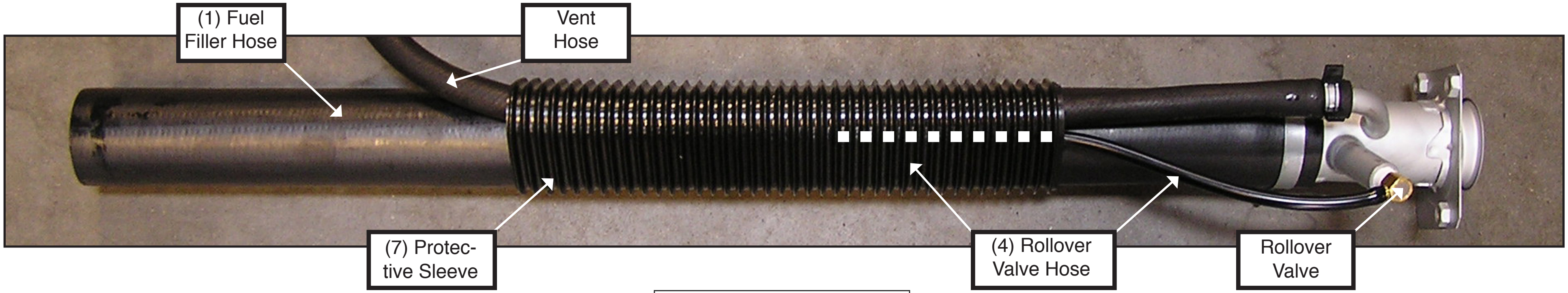

(1) Fuel Filler Hose
Vent Hose
(7) Protective Sleeve
(4) Rollover Valve Hose
Rollover Valve

Figure 6

Filler Neck Installation

The fuel filler neck must be installed with the proper orientation on the body. The neck should be installed with the roll-over valve pointing upward, with the bottom edge of the filler neck oriented parallel to the ground, plus 33 to minus 7 degrees. See Figure 7 below for the proper orientation.

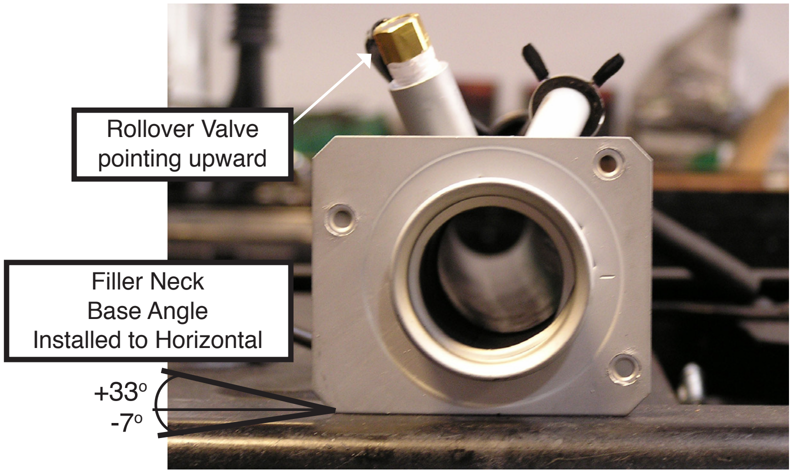
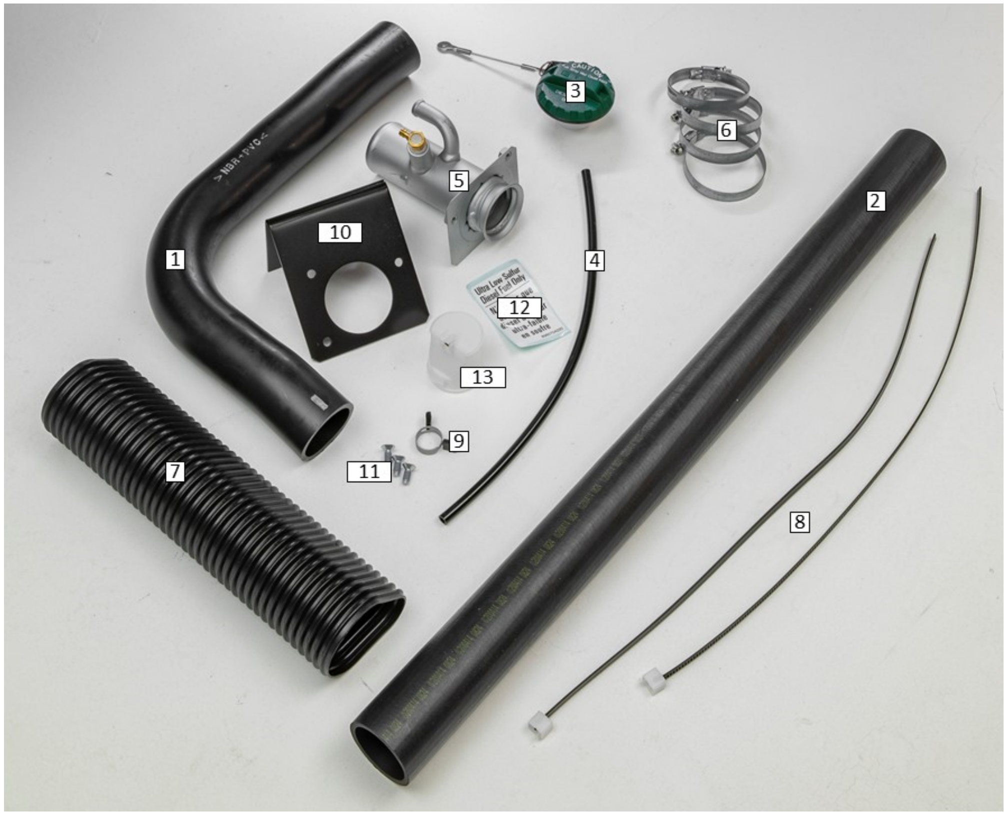

Rollover Valve pointing upward
Filler Neck Base Angle Installed to Horizontal
+33°
-7°

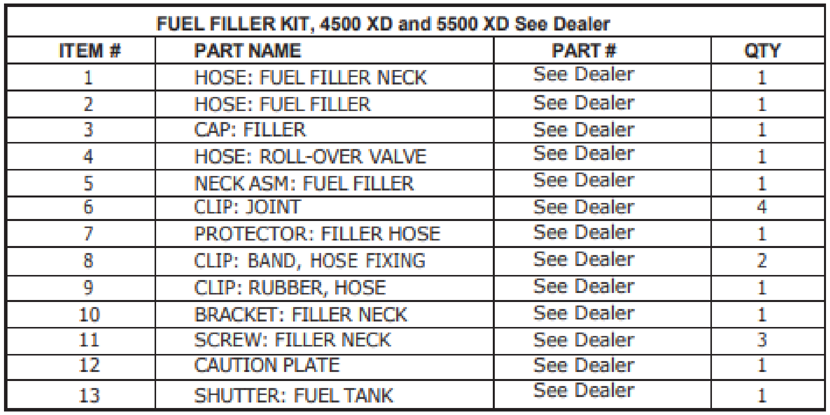
Figure 7

4500 XD & 5500 XD *Diesel Fuel Fill Kit Parts List*

Please review these instructions prior to installation of the fuel filler kit.

Parts Kit: There are two separate parts kits used for the 2011 and later model year N-diesel products. See parts list below.





FUEL FILLER KIT, 4500 XD and 5500 XD See Dealer			
ITEM #	**PART NAME**	**PART #**	**QTY**
1	HOSE: FUEL FILLER NECK	See Dealer	1
2	HOSE: FUEL FILLER	See Dealer	1
3	CAP: FILLER	See Dealer	1
4	HOSE: ROLL-OVER VALVE	See Dealer	1
5	NECK ASM: FUEL FILLER	See Dealer	1
6	CLIP: JOINT	See Dealer	4
7	PROTECTOR: FILLER HOSE	See Dealer	1
8	CLIP: BAND, HOSE FIXING	See Dealer	2
9	CLIP: RUBBER, HOSE	See Dealer	1
10	BRACKET: FILLER NECK	See Dealer	1
11	SCREW: FILLER NECK	See Dealer	3
12	CAUTION PLATE	See Dealer	1
13	SHUTTER: FUEL TANK	See Dealer	1

Figure 8

2025MY 4500 XD & 5500 XD Diesel Rear View Fuel Fill

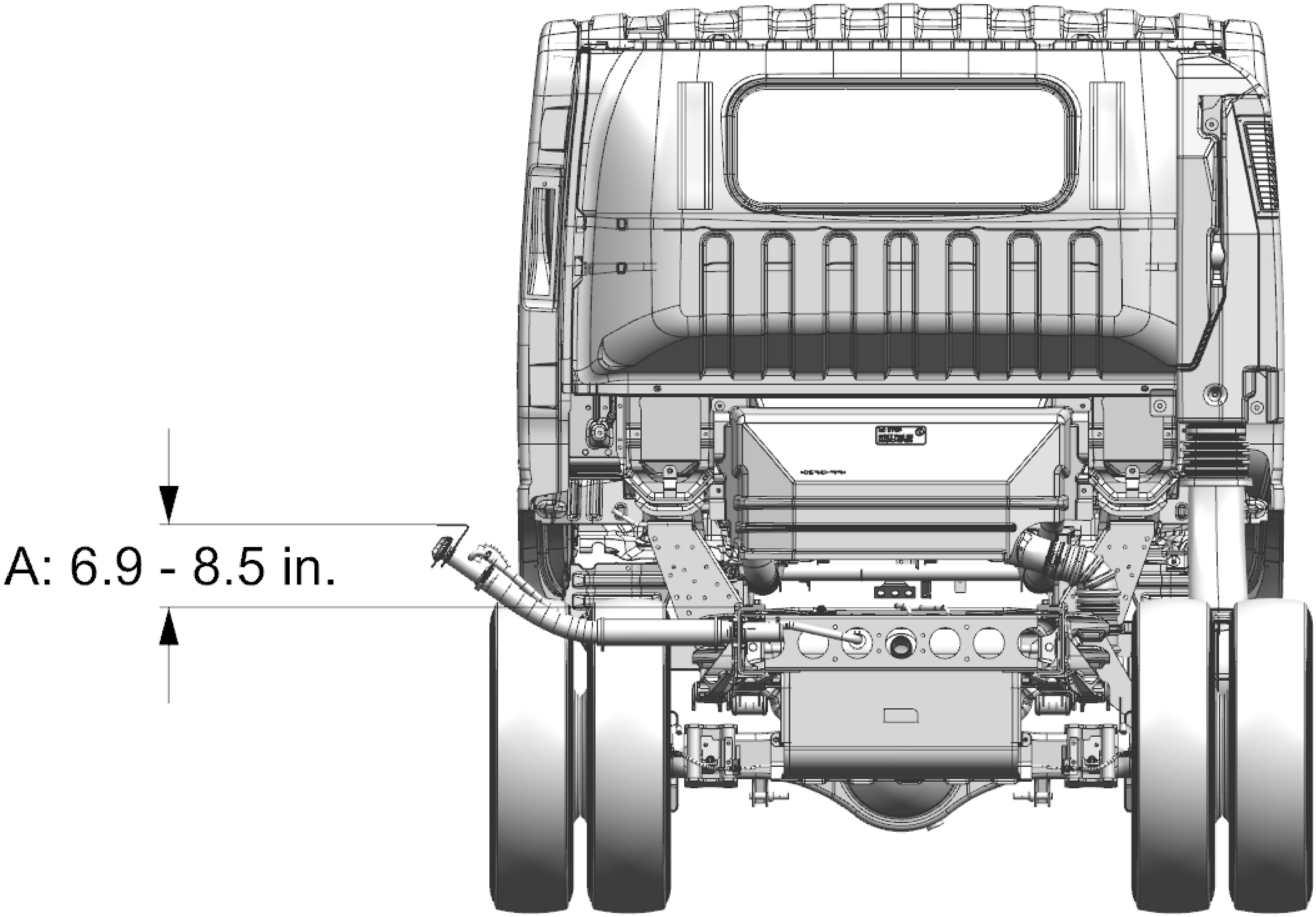


Figure 9

2025MY 4500 X*D* & 5500 X*D Diesel* Top *View Fuel Fill*

Dimensions:
B = 29.75 inches (756 mm)
C = 34.00 inches (863 mm)
D = 39.29 inches (998 mm)
E = 33.86 inches (860 mm)
F = 50.60 inches (1,285 mm)

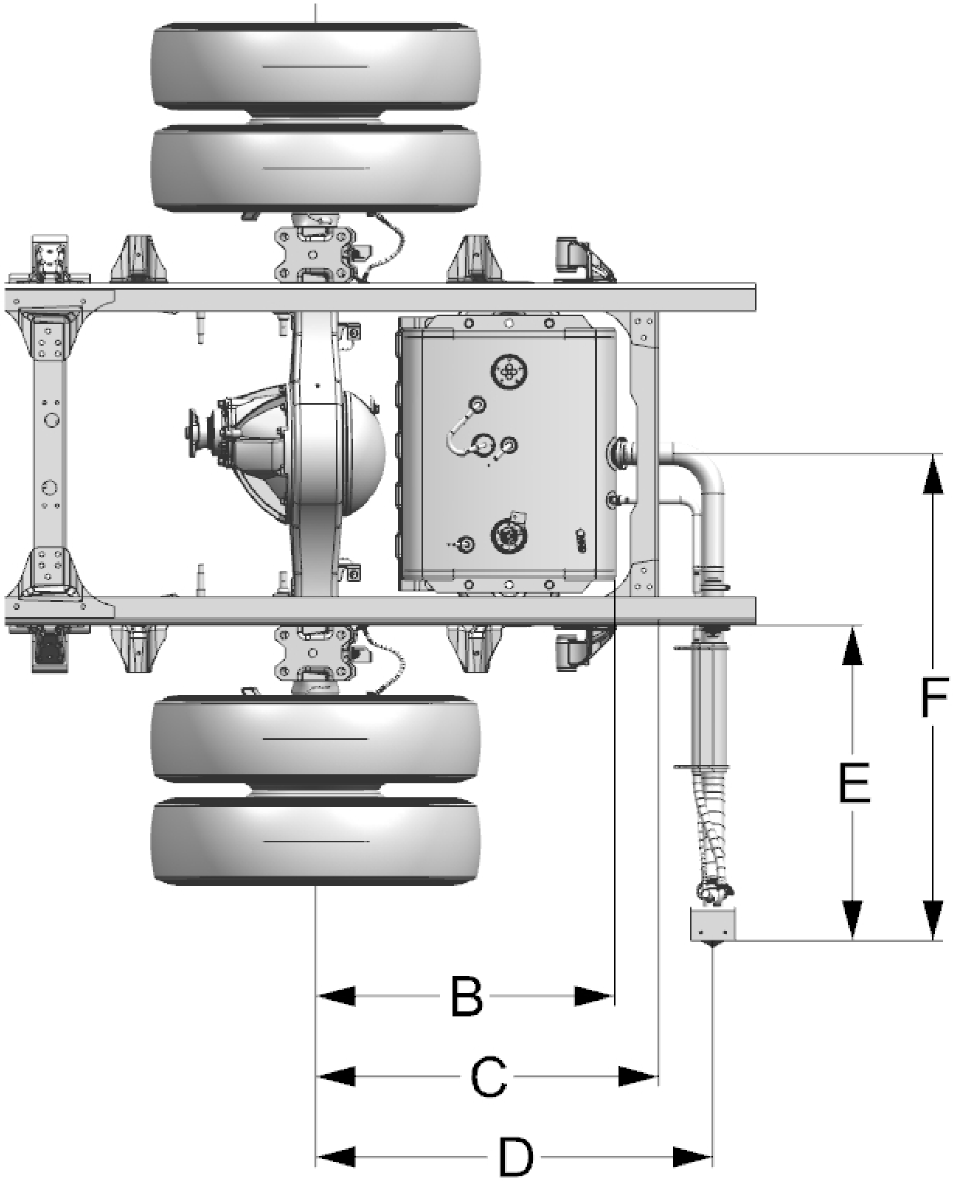
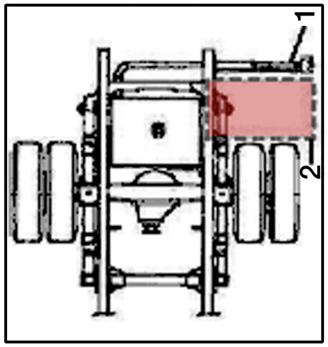


Figure 10

2025MY 4500 XD & 5500 XD Diesel Hose Modification for Various Width Bodies and Fuel Fill Vent Protection



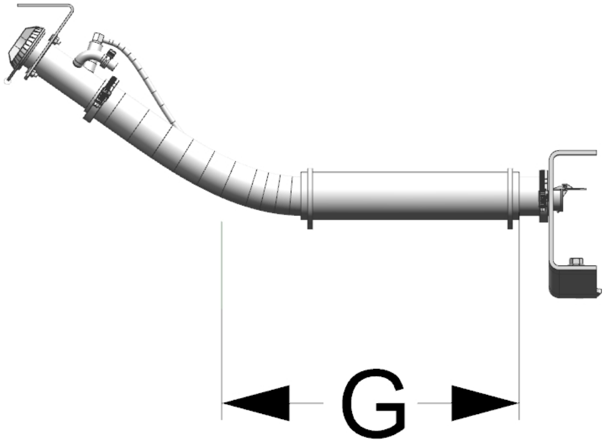
Fuel fill vent and neck should be protected from road spray

1. FUEL FILLER NECK
2. RECOMMENDED MUD FLAP MOUNTING AREA (RED ZONE).

Figure 11

Dimension: G

Body width	Remove
102 inch wide body	remove 0 inches
96 inch wide body	remove 3 inches
90 inch wide body	remove 5 inches
86 inch wide body	remove 8 inches
80 inch wide body	remove 8 inches



NOTE: Shorten hose by dimension "G" based on chart at left.

Figure 12

3500, 4500 & 5500 *Gas In-Frame Fuel Fill Installation Instructions*

1. Disconnect battery.
2. Remove the short filler hose and the short breather hose from the breather and fuel filler pipes and the filler neck bracket assembly.
3. Filler kit hoses are designed for the 102 inch wide body width. Modify the hoses as required to fit the desired body width (Figure 20 - Dimension D).
4. Install flexible filler hose (Item 1) to fuel filler pipe and filler neck bracket assembly using existing screw clamps.
5. Install flexible breather hose (Item 2) to fuel breather pipe and filler neck bracket assembly using new clamps (item 3)
6. The filler neck must be mounted to allow the filler neck bracket to be parallel to the frame horizontal.
7. Filler neck (Figure 14 - Dimension A) must be between 6.85 inches and 8.5 inches above frame.
8. Secure the filler plate and ground strap to the bottom of the body and check for leaks. Ground straps should be connected to brackets or flanges, not the fuel filler hose or breather hose. Ground straps should have a minimum of 10mm clearance, in all deflected positions, from any metallic portions of the fuel filler hose or breather hose assembly.
9. Ensure that fill hose does not sag, creating an area where the fuel could pool in the fill hose.
10. Reconnect battery.

Fuel Type

Use regular unleaded gasoline rated at 87 octane or higher that meets specification ASTMD4814 in the U.S. Blended gasoline is suitable for use in the Chevrolet LCF Gas Chassis.

Ethanol is ethyl or grain alcohol. Properly-blended fuel that is no more than 10% ethanol is fine for your vehicle.

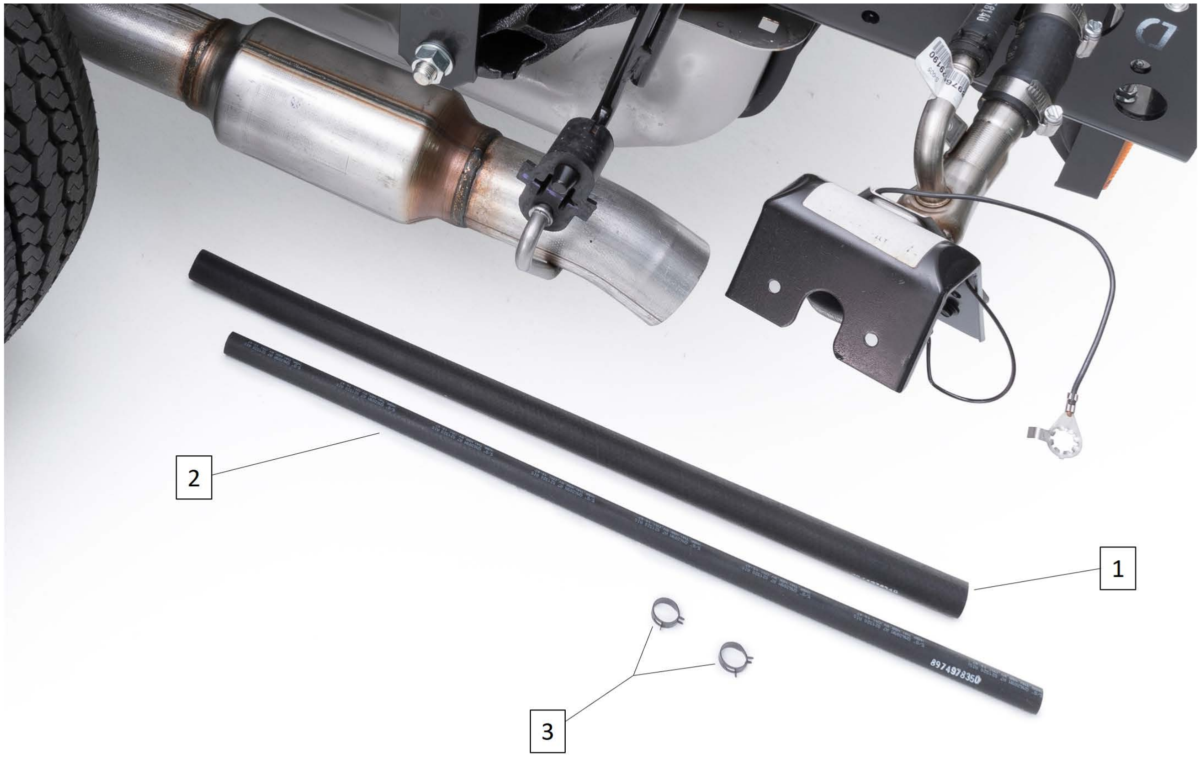
NOTICE: Fuel that is 15% Ethanol is not suitable for your vehicle. Fuel that is than 85% Ethanol is not suitable for your vehicle.

Methanol is methyl or wood alcohol.

NOTICE:

- 6.6L Engine: Fuel that is more than 5% methanol is bad for your vehicle. And even at 5% or less, there must be “co-solvents” and corrosion preventives in this fuel to help avoid damage to the fuel system from methanol.
- 6.0L Engine: Methanol-Gasoline mixtures are not suitable for your vehicle.

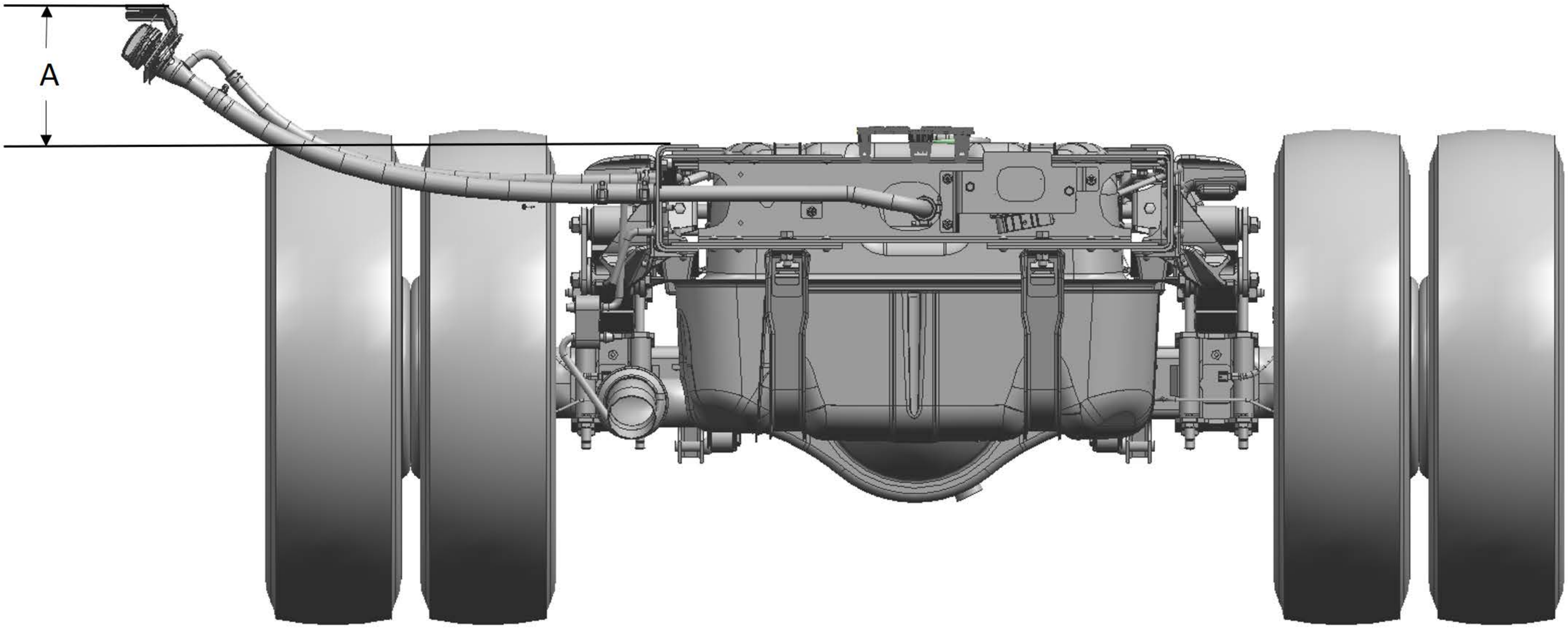
3500, 4500 & 5500 *Gas Fuel Fill Parts Illustration*



FUEL FILLER KIT - 3500 HG & 4500 HG GAS		
PN: See Dealer		
Number	Descrpition	Quantity
1	Hose, Fuel Filler	1
2	Hose, Breather	1
3	Clamp, Rubber Hose	2

Figure 13

3500, 4500 & 5500 *Gas Rear View Fuel Fill*



Dimension A = 6.85-8.5 inches (174-216 mm)

*6.6L LCF Gas shown

Figure 14

3500, 4500 & 5500 *Gas Top View Fuel Fill*

Dimensions:
B = 35.85 inches (860 mm)
C = 37.79 inches (960 mm)
D = 34.25 inches (870 mm)
E = 51.61 inches (1311 mm)

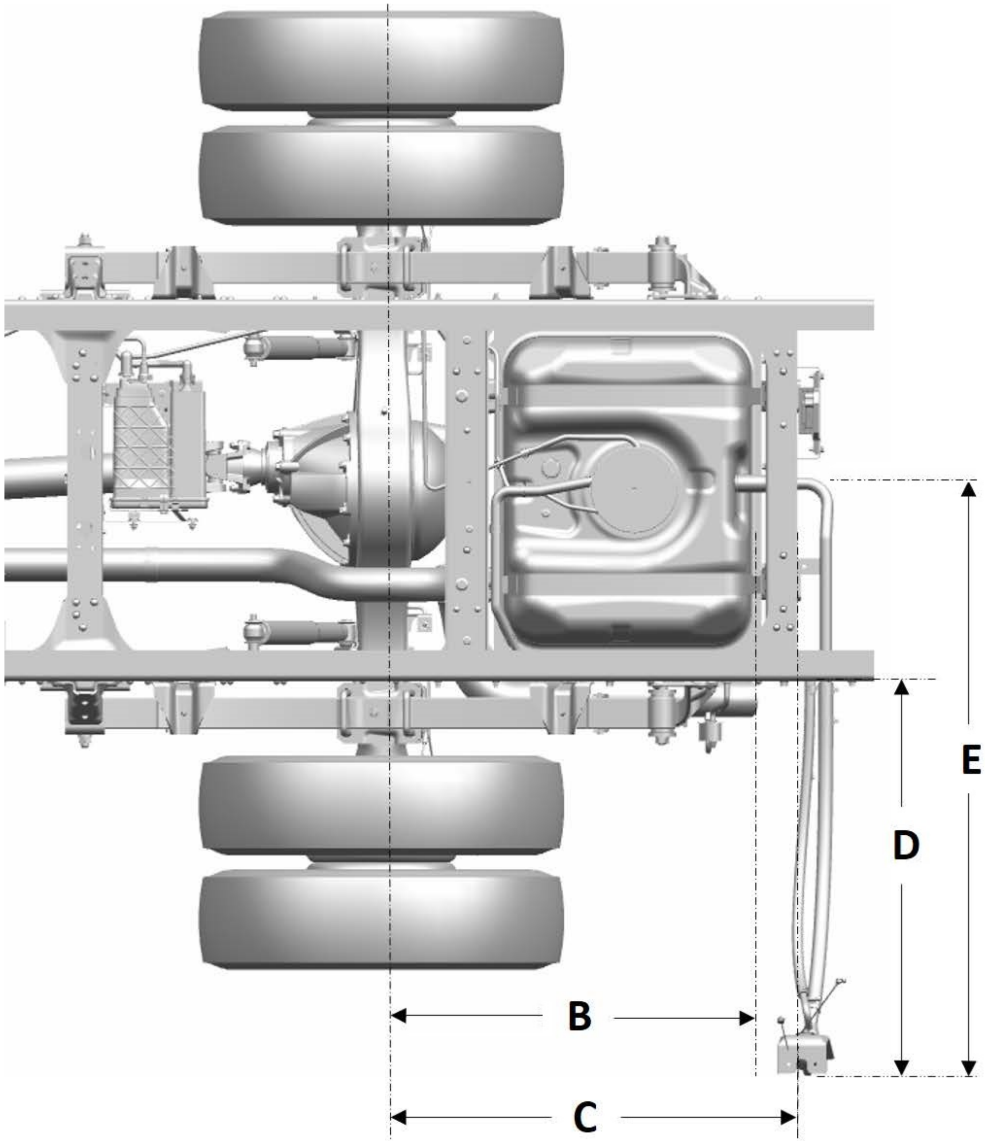


Figure 15

*6.6L LCF Gas shown

3500, 4500 & 5500 *Gas 6.6L Installation Considerations*

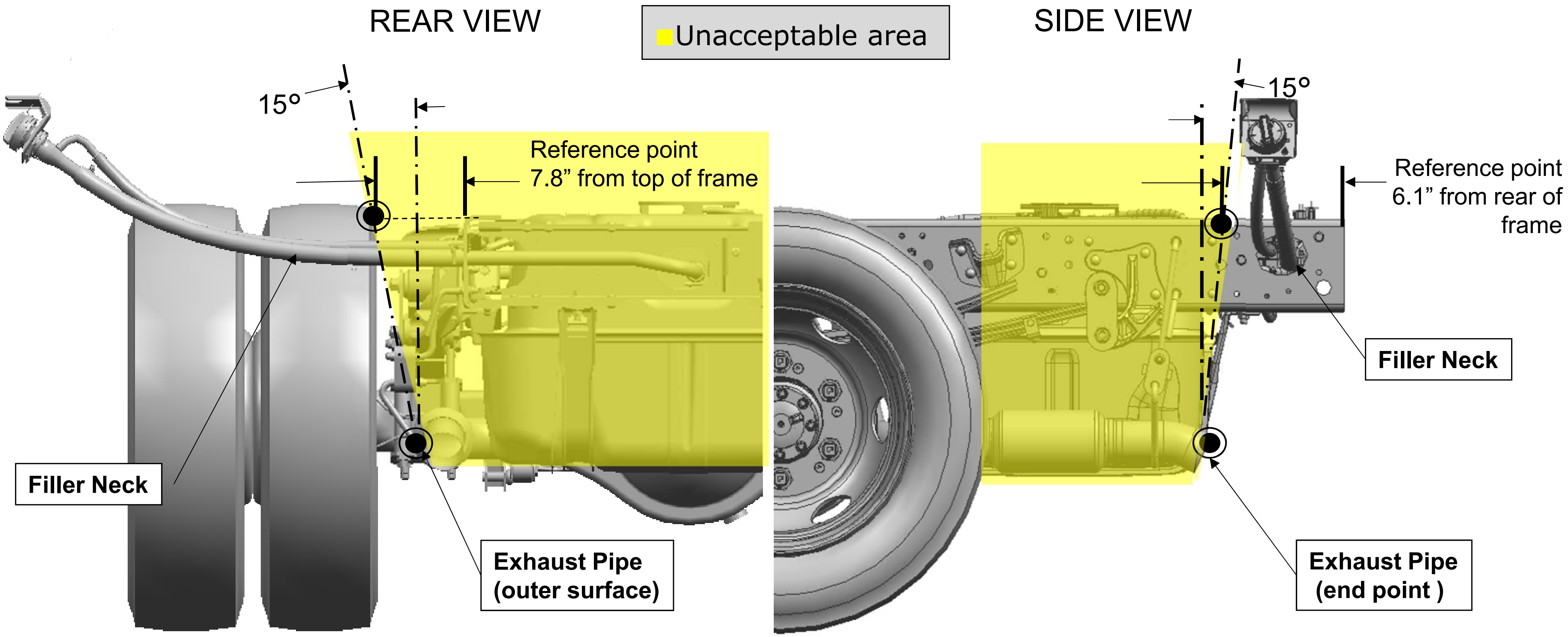

REAR VIEW
🟨Unacceptable area
SIDE VIEW
15°
Reference point
7.8” from top of frame
Filler Neck
Exhaust Pipe
(outer surface)
15°
Reference point
6.1” from rear of
frame
Filler Neck
Exhaust Pipe
(end point)

Figure 16

Notes: 1. Modification of the filler neck outside the frame rail must comply with FMVSS regulations for avoiding fuel dripping on hot surfaces.

2. Do not install the connection point of Filler neck, pipe and hoses in unacceptable areas shown in the side and rear view above.

3500, 4500 & 5500 *Series Gas Through the Rail Fuel Fill Frame Hole*

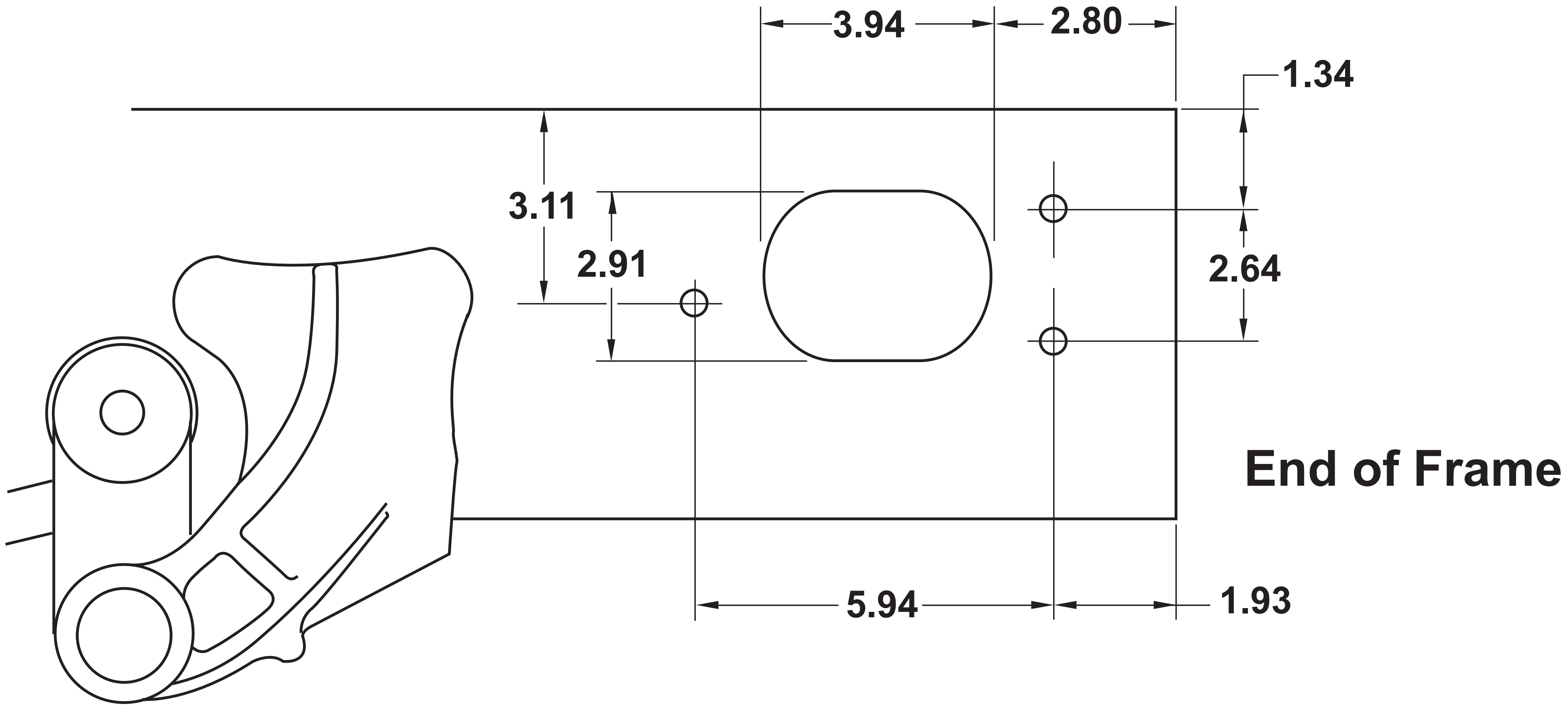

3.94
2.80
1.34
3.11
2.91
2.64
End of Frame
5.94
1.93

Figure 17

Dimensions in inches

DOCUMENT FOR INCOMPLETE VEHICLE

APPLICABLE TO THE CHEVROLET 2025+ MY LCF

Isuzu Commercial Truck of America, Inc.
1400 S. Douglass Road, Suite 100 Anaheim, CA 92806

DO NOT REMOVE

THIS DOCUMENT MUST REMAIN WITH THIS VEHICLE UNTIL IT IS CERTIFIED AS A COMPLETED VEHICLE.

PLACE LABEL HERE

The Label affixed here includes the following information:

- The name of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR) expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear
- Tire size, rim size, cold tire pressure.

This document is furnished as required by the Canada Motor Vehicle Safety Act (CVMSA) and United States (U.S.) Federal Motor Vehicle Safety Regulations (FMVSR) to aid intermediate and final stage manufacturers in their determination of conformity of the completed vehicle with applicable Canada Motor Vehicle Safety Standards (CMVSS), U.S. Federal Motor Vehicle Safety Standards (FMVSS), Canadian On-Road Vehicle and Engine Emission Regulations and Canada Interference Causing Equipment Standard - ICES-002. Also included are instructions, which must be followed in order to assure that U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB)* emission certification requirements and U.S. National Highway Traffic Safety Administration (NHTSA) Fuel Economy Regulations and Canada/U.S. EPA Greenhouse Gas Regulations are met.

The label attached to this document will indicate this vehicle was either manufactured by Isuzu Motors Limited, Japan or by Builtmore Contract Manufacturing US, a division of The SHYFT Group, Inc. under a contractual agreement with Isuzu. All inquiries regarding the content of this document should be forwarded to Chevrolet through the www.gmupfiter.com website.

This document is not a substitute for knowledge and understanding of the requirements of the Canada Motor Vehicle Safety Act, Federal Motor Vehicle Safety Regulations (FMVSR); or applicable Canada Motor Vehicle Safety Standards (CMVSS) and U.S. Federal Motor Vehicle Safety Standards (FMVSS). Intermediate and final stage manufacturers should be familiar with the Regulations and Standards referred to above to be aware of their specific responsibilities as they relate to the final destination and sale of each incomplete vehicle.

Any intermediate or final stage manufacturer making material alterations to this incomplete vehicle during the process of manufacturing the complete vehicle should be constantly vigilant to recognize all effects, either direct or indirect, on other components, assemblies or systems caused by any alteration. No alteration should be made to the incomplete vehicle that directly or indirectly results in any component, assembly or system being in nonconformance with any applicable Canada Motor Vehicle Safety Standard or U.S. Federal Motor Vehicle Safety Standard or Emission Regulation or Fuel Economy/Greenhouse Gas Regulation.

The statements contained in this Incomplete Vehide Document are accurate as of the date of manufacture of the Incomplete Vehicle and can be relied on by any intermediate and/or final stage manufacturer as a basis for certification.

*Please see the Vehicle Emission Control Information to identify if the vehicle is California certified.

INTRODUCTION

This document contains information relative to conformance of this incomplete vehicle with the following:

Part I - **U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS**

Part II - **U.S. EPA, CALIFORNIA, AND CANADA EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA/ NHTSA / CANADA GREENHOUSE GAS EMISSIONS/FUEL ECONOMY REGULATIONS**

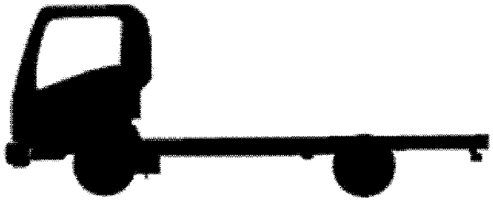
Part III - **CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD**

This document pertains to the following styles of trucks: Diesel or Gasoline engine

Single cab model

MODEL

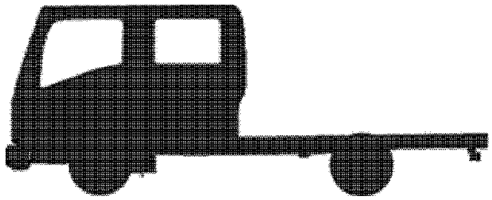
3500 HG
4500 HG
4500 XD
5500 HG
5500 XD



Crew cab model

MODEL

3500 HG
4500 HG
4500 XD
5500 HG
5500 XD



NOTE: Incomplete vehicle can be built into straight truck type vocational vehicles.
It cannot be built into a Truck Tractor or Bus

***Emission Certification:**

To verify if this vehicle is certified to California emission standards, please locate the Vehicle Emission Control Information label generally located in the driver door area. The compliance statement on the label must say 'This vehicle complies with U.S. EPA and California regulations." If the label only states U.S EPA regulations, then the vehicle is not California certified.

PARTI

U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS

This section contains a list of Canada Motor Vehicle Safety Standard (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS), followed by a section entitled Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). An appropriate statement of applicability is made for each standard, and by vehicle model as it relates to the incomplete vehicle.

The identifiers TYPE 1, TYPE 2 or TYPE 3 prefix statements (of applicability) regarding Canada Motor Vehicle Safety Standards {CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). "Examples" of these statements follow:

TYPE 1 A statement that the vehicle, when completed, will conform to the standard if no alterations are made in identified components of the incomplete vehicle. EXAMPLE: This vehicle when complete will conform to CMVSS 104 and FMVSS No. 104,. Windshield Wiping and Washing Systems, if no alterations are made in the windshield wiper components.

TYPE 2 A statement of specific conditions of final manufacture under which the manufacturer specifies that the completed vehicle will conform to the standard. EXAMPLE: This vehicle when completed will conform to CMVSS 121 and FMVSS 121, Air Brake Systems, if it does not exceed any of the gross axle weight ratings, if the center of gravity at GVWR is not higher than## feet above the ground, and if no alterations are made. to any brake system component.

TYPE 3 A statement that conformity with the standard cannot be determined based upon the components supplied on the incomplete vehicle, and that the incomplete vehicle manufacturer makes no representation to conformity with the standard.

In accordance with the requirements of Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations Part 568.4, the following information is included on the label affixed to the front cover of this document:

- The name and mailing address of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR} expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear.

In addition, the final stage manufacturer is responsible under Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations and Part 567.5, to place the GVWR and the GAWR of each axle, on the Final Vehicle Certification Label. Required on label is the "Gross Vehicle Weight Rating" or "GVWR" followed by the appropriate value in kilograms and (pounds), which shall not be less than the sum of the unloaded vehicle weight, rated cargo load, and 68 kg (150 lb.) times the number of the vehicle's designated seating positions.

Unloaded Vehicle Weight means the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo or occupants or accessories that are ordinarily removed from the vehicle when they are not in use.

During the completion of this vehicle, GVWR and GAWR may be affected in various ways, including but not limited to the following:

- The installation of a body or equipment that exceeds the rated capacities of the incomplete vehicle.
- The addition of designated seating positions that exceed the rated capacities of the incomplete vehicle.
- Alterations or substitution of any components such as axles, springs, tires, wheels, frames, steering and brake systems that may affect the rated capacities of the incomplete vehicle.

PART I - CHART A

LIST OF CANADA MOTOR VEHICLE SAFETY STANDARDS (CMVSS), AND FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS), APPLICABLE TO GASOLINE OR DIESEL FUELED TRUCKS WITH A GVWR OF GREATER THAN 4536 kg (10,000 lb)

SEE STATEMENTS REGARDING CMVSS AND FMVSS ON PAGES THAT FOLLOW

CMVSS	FMVSS	TITLE	LCF
CMVSR Sec 6-7	Part 567'"*	Labeling and Documentation Requirements	3
101	101	Controls and displays	1
102	102	Transmission shift lever sequence, starter interlock and transmission braking effect	1
103	103	Windshield defrosting and defogging systems	1
104	104	Windshield wiping and washing systems	1
105	105	Hydraulic brake systems	2
106	106	Brake hoses, Hydraulic, air and vacuum	1
108	-	Daytime Running Lights	2
108	108	Lamps, reflective devices and associated equipment	2
111	111	Mirrors and Rearview Visibility Systems	1
113	113	Hood Latch System	1
115	Part 565 **	Vehicle Identification Number	1
116	116	Motor-vehicle brake fluids	1
119	119	New pneumatic tires	1
120	120	Tire selection and rims	2
124	124	Accelerator control systems	1
-	125	Warning devices designed to be carried in motor vehicles	3
136	136	Electronic Stability Systems for Heavy Vehicles	3
205	205	Glazing materials	1
206	206	Door locks and door retention components	1
207	207	Seating systems	1
208	208	Occupant Crash Protection	1,3
209	209	Seat belt assemblies	1,3
210	210	Seat belt assembly anchorages	1,3
302	302	Flammability of interior materials	1
ICES-002	-	Canada interference causing equipment standard [PART III]	1
1106	40 CFR 202	Noise Emissions [PART II]	1

*** TYPE 1, 2 or 3 numbers to the right side of the table above designate the appropriate paragraph in the CMVSS or FMVSS standards that follow.**

**** CFR Title 49 Transportation Part 565, Part 567**

Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS).

CMVSR SEC. 6 and 49 CFR 567 LABELING AND DOCUMENTATION REQUIREMENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of Incomplete Vehicles contained in this document.

This incomplete vehicle, when completed in stages by an intermediate and final stage manufacturer will comply with the requirements of Part 567 or the CMVSR Section 6, when the intermediate and final stage manufactures provide additional labeling to meet these requirements. GM makes no representation as to conformity.

CMVSS 101 and FMVSS 101- CONTROLS AND DISPLAYS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of Incomplete Vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 101 and FMVSS 101 providing no alterations are made which affect the size, location, identification, or illumination of the controls and displays identified or the location, travel and type of driver's seat. If the driver's seat is installed by the intermediate or final stage manufacturer, the "H" point must be located as shown in the "Body Builder Manuals" and visibility and operation of the controls and displays listed below must meet the requirements of the standard.

The following controls must be operable, and the following displays for the following functions- and malfunctions shall be fitted in such a manner that they are identifiable, by the driver while the driver is seated in the driver's designated seating position with the driver's seat belt fastened around the driver in accordance with the manufacturer's instructions:

Hand operated controls (if equipped):

- Automatic vehicle speed (cruise control)
- Automatic transmission shift lever
- Clearance lamps (switch)
- Driver's Sunvisor
- Engine Idle Speed
- Engine Start
- Engine Stop
- Hazard warning signal
- Hazard warning switch
- Headlamps
- Headlamp high or low beam switch
- Heating and air conditioning fan
- Heating and air conditioning system
- Horn control
- Identification lamps (switch)
- Ignition (switch)
- Illumination intensity control
- Master lighting switch
- Position, side marker, end-outline marker, identification or clearance lamps
- Service brake
- Steering wheel
- Tail lamps
- Turn signal
- Windshield defogging and defrosting systems
- Windshield washer (washing system)
- Windshield wiper (wiping system)

Foot operated controls (if equipped):

Accelerator
Park brake (pedal)
Service brake (pedal)

Displays (if equipped):

Air brake low pressure
Air bag system readiness
Antilock brake system malfunction
Battery charging condition
Brake lining wear-out condition
Brake system malfunction (*)
Brake failure warning
Electrical charge indicator
Engine oil pressure
Fuel level
Gross loss of brake pressure condition
Hazard warning signal
Engine coolant temperature display
Gear position
DPF (Diesel Particulate Filter) Gauge
Headlamp high beam
Low fuel indicator
Low brake air pressure telltale
Low brake fluid condition
Odometer(*)
Parking brake applied
Passenger air bag status
Seat belt (unfastened telltale)
Speedometer(*)
Transmission control position
Turn signal(s)
Variable brake proportioning system malfunction
Multi information display (MID)
DEF (Diesel Exhaust Fluid) Gauge

* For CMVSS only, when Canadian option is specified.

If the intermediate or final stage manufacturer installs any of the above controls and displays, those controls and displays will also have to meet the requirements of this standard.

CMVSS 102 and FMVSS 102 -TRANSMISSION SHIFT LEVER SEQUENCE, STARTER INTERLOCK AND TRANSMISSION BRAKING EFFECT

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 102 and FMVSS 102 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Automatic Transmission (A/T) control and identification system,. including but not limited to:

A/T gear shift sequence and control logic (electrical or mechanical)
A/T steering column assembly
A/T control from floor shift mechanism to transmission linkage
A/T floor shift mechanism
A/T neutral safety switch assembly and wire
A/T position indicator dial
Brake - A/T interlock controls
Engine starter interlock controls
Vehicle & Chassis wiring harnesses
A/T position indicator (pointer}
A/T position indicator actuating linkage
Automatic transmission assembly
Transmission shift position p.attern (knob, plate or label)

CMVSS 103 and FMVSS 103 - WINDSHIELD DEFROSTING AND DEFOGGING SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 103 and FMVSS 103 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (ff equipped):

Windshield defrosting and defogging systems, including but not limited to:

- Chassis and instrument panel wiring harness assembly
- Defroster air distributor assembly (manifold)
- Defroster air duct assembly
- Defroster air hoses - manifold to nozzle
- Defroster air to windshield outlet assembly (nozzle)
- Defroster outlet to heater assembly adapter
- Engine water outlet thermostat assembly
- Heater & defroster assembly- including motor & blower
- Heater & defroster control (mechanical)
- Heater blower motor resistor assembly (blower speed control)
- Heater & water hoses and hose assemblies
- Heater water inlet valve control
- Windshield assembly

CMVSS 104 and FMVSS 104 -WINDSHIELD WIPING AND WASHER SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 104 and FMVSS 104 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Windshield wiping and washing systems, including but not limited to:

- Chassis wiring harness
- Washer reservoir cap
- Water reservoir filler assembly
- Windshield assembly
- Windshield wiper arm assembly
- Windshield wiper blade assembly
- Windshield wiper linkage assembly
- Windshield wiper and washer control
- Windshield wiper and washer motor and pump assembly
- Windshield washer flUid reservoir
- Windshield washer system hoses
- Windshield washer nozzle

CMVSS 105 and FMVSS 105 - HYDRAULIC BRAKE SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, if equipped with hydraulic brakes, when completed, will conform to CMVSS 105 and FMVSS 105 providing no alterations are made which affect the function, physical or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems identified below. In addition, the maximum vertical center of gravity specified below must not be exceeded at maximum GVWR and rated front and rear GAWR.

Application	Maximum Center of Gravity millimeter (inches) above ground
LCF Class 3,4,5	1600 mm (63")

Hydraulic Brake Systems, including but not limited to:

Hydraulic brake lines, fittings and routings including gauges, warning devices and warning statements
Hydraulic brake valves and components
Hydraulic brake reservoir
Service and/or parking brake assemblies and components
{Power boosters, master cylinder, ABS module, calipers, wheel cylinders, etc.)
Tires
Wheelbases
Brake pedal, brake light switch, parking brake hand level and switch, and related mechanical components
Brake and ABS warning light
Vacuum pump, tank, pipes and hoses (including warning devices and statements)
Master cylinder reservoir warning statement
Hydraulic booster pump, pipes, hoses and reservoir (including warning devices)

CMVSS 106 and FMVSS 106 - BRAKE HOSES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 106 and FMVSS 106 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Hydraulic Air, and Vacuum Brake Hoses
Hoses and hose end fittings
Labeling requirements

Brake Hose Assemblies - and Brake Hose End Fittings

CMVSS 108 - DAYTIME RUNNING LIGHTS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed will conform to the Daytime Running Lamps (DRL) requirements of CMVSS108 providing no alterations are made to the ignition switch, DRL system components or wiring, and any vehicle forward lighting as manufactured by Chevrolet.

CMVSS 108 and FMVSS 108 - LAMPS, REFLECTIVE DEVICES AND ASSOCIATED EQUIPMENT

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicle.s contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 108 and FMVSS 108 providing it is completed in accordance with the following specific conditions by the final stage manufacturer:

1. Body width must be between 2.032 m (80") and 2.438 m (96"). (2.184 m (86") MIN Body Width For Crew Cab).

2. Each of these devices must be properly installed on the completed vehicle and meet all the requirements of CMVSS 108 and FMVSS 108:
   a. The following devices, when provided, located and/or wired by Chevrolet meet the requirements of this standard.
      Headlamps or Daytime running lamps
      Cab roof clearance and ID lamps {front)
      Side marker lamp (Front)
      Side reflex reflectors (front)
      Turn signal flasher
      Turn signal lamps (front)
      Turn signal operating unit
      Vehicle hazard warning signal operating unit
      Vehicle hazard warning signal flasher

   b. The following lamps and reflective devices are temporarily mounted on this incomplete vehicle as required for transportation. When relocating them, intermediate or final stage manufacturers must refer to the Chevrolet Body Builders Manual and assure conformance with the location, visibility, and operational requirements of CMVSS 108 and FMVSS 108.
      License plate lamp
      Rear combination lamps (tail lamps, stop lamps, turn signal lamps and back-up lamps)
      Reflex reflectors {rear)

   c. No part of the completed vehicle shall be installed so as to prevent any of the devices listed in (a) or (b) above from meeting their required photometric output at the specified test points. If such interference exists, the applicable devices may have to be relocated or additional devices added to meet the requirements of CMVSS 108 and FMVSS 108:
      Any CMVSS 108 and FMVSS 108 part shall not be painted.

d. The following devices are not installed on this incomplete vehicle or supplied by Chevrolet. When added by intermediate or final stage manufacturers, they must also meet the requirements of CMVSS 108 and FMVSS 108:

Clearance lamps (rear)
Identification lamps (rear)
Side reflex reflectors (rear)
Side marker lamps (rear)

e. The following additional devices must be installed on the van body and meet all requirements of this standard if the overall vehicle length is 9.1 m (30 feet) or greater.

Intermediate side marker lamps
Intermediate side reflex reflectors

3. No alterations (other than any relocation of Items in 2) b.) which may be necessary for conformance to CMVSS 108 and FMVSS 108 should be made which affect the location, mounting surfaces, function, environment or visibility clearance of the above listed devices which have been installed on this incomplete vehicle.

CMVSS 111 and FMVSS 111- REARVIEW MIRRORS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to FMVSS 111 providing no alterations or substitutions are made to the outside rearview mirrors, the driver's seat location is not altered, and the body is installed symmetrical about the vehicle centerline. The overall width should be no greater than;

Model	Width Limit millimeter (inches)	Width Limit with 102" wide mirror brackets millimeter (inches)
N-Series Class 3,4,5	2438 mm (96")	2590 mm (102")

CMVSS 113 and FMVSS 113 - HOOD LATCH SYSTEM

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 113 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped)

Hood	Hood Latch System

CMVSS 115 and 49 CFR 565 -VEHICLE IDENTIFICATION NUMBER

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 115 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Vehicle Identification Number (VIN)	VIN label or plate
	VIN plate fasteners

CMVSS 116 and FMVSS 116 - MOTOR VEHICLE BRAKE FLUIDS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document {unless otherwise noted on the cover).

This incomplete vehicle, when equipped with approved hydraulic brake fluid will conform to CMVSS 116 and FMVSS 116 providing no alterations are made which affect the physical or chemical properties of the brake fluid.

CMVSS 119 and FMVSS 119 - NEW PNEUMATIC TIRES FOR MOTOR VEHICLES WITH A GVWR OF MORE THAN 4,536 KILOGRAMS (10,000 POUNDS)

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS119 and FMVSS119 providing no alternation are made which affect the function, physical, chemical or mechanical properties, environment, location or vital spatial clearance of the components, assemblies or systems including but not limited to those listed below:

Tires	Wheels

CMVSS 120 and FMVSS 12.0 - TIRE SELECTION AND RIMS FOR VEHICLES OTHER THAN PASSENGER CARS

Applies to all models of incomplete vehi.cles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 120 and FMVSS 120 provided:

A. No alterations are made which affect the function, physical or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to:

Owner Manual Instructions
Tires
Wheels

B. GVWR, GAWR front and rear weight ratings as listed on the incomplete vehicle label affixed to the front cover of this document are not exceeded.

C. The tire and wheel information shown on the incomplete vehicle label must be transferred to the final stage manufacturer's Certification label or Tire Information Label providing no equipment or tire pressure changes are made and the final stage manufacturer labels the vehicle in compliance with CMVSS 120 and FMVSS120.

NOTE: Incomplete Vehicles referenced in this document may be shipped with reduced tire pressures for shipping purposes only. Inflate tires to specified pressure before delivery to customers.

CMVSS 124 and FMVSS 124 - ACCELERATOR CONTROL SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

ThiS incomplete vehicle, when completed, will conform to CMVSS 124 and FMVSS 124 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Accelerator/throttle control systems, including but not limited to:

Accelerator pedal and attachments
Accelerator lever and supporting bracket assembly
Accelerator cable, support brackets, and seals
Accelerator return spring(s)
Attachment to injection pump lever - pin, hole, or ball stud
Downshift switch
Idling control cable assembly

FMVSS 125 -WARNING DEVICES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to FMVSS 125 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Warning devices (if equipped)

Safety warning triangles
Fire Extinguisher
Backup Alarm

CMVSS 136 and FMVSS 136 - ELECTRONIC STABILITY CONTROL SYSTEMS FOR HEAVY VEHICLES

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

Conformity with CMVSS 136 and FMVSS 136 cannot be determined upon the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

This incomplete vehicle has not been built, tested, or manufactured with an electronic stability control system.

NOTE: ThiS incomplete vehicle cannot be built into a Truck Tractor.

CMVSS 205 and FMVSS 205 - GLAZING MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 205 and FMVSS 205 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Glazrng material
Monogram
Driver's Side Reference Point {SgRP}
Visibility of the monogram
Windshield shade banding

Final compliance with CMVSS 205 and FMVSS 205 is the responsibility ofthe final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS. 206 and FMVSS 206 - DOOR LOCKS AND DOOR RETENTION COMPONENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 206 and FMVSS 206 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

- Door lock
- Door latch
- Door latch striker plate
- Door hinge
- Inside lock control linkage
- Exterior door handles

Final compliance with CMVSS 206 and FMVSS 206 is the responsibility of the final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS 207 and FMVSS 207 -ANCHORAGE OF SEATS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unle.ss otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 207 and FMVSS 207 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Seating systems, including but not limited to:

- Floor pan assemblies
- Folding seat or seat back latch assembly
- Seat adjuster assembly
- Seat anchorage's brackets reinforcements, attachment hardware, etc.
- Seat assembly
- Seat or seat back latch assembly
- Seat or seat back latch release control
- Seat or seat back latch striker
- Seat riser

CMVSS 208 and FMVSS 208 - OCCUPANT CRASH PROTECTION

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document **(unless otherwise noted on the cover).**

This incomplete vehicle, when completed, will conform to the seat belt provision sections of CMVSS 208 and FMVSS 208 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrolet including but not limited to:

Owner Manual Instructions
Seat anchorages
Seat assemblies
Seat belt anchorages
Location/configuration of designated seats
Seat belt assemblies
Seat belt warning system

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 208 and FMVSS 208 cannot be determined based upon the components supplied by intermediate or final stage manufacturer, and Chevrolet makes n.o representation to conformity with the standard.

CMVSS 209 and FMVSS 209 - SEAT BELT ASSEMBLIES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the CMVSS 209 and FMVSS 209 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrolet including but not limited to:

Owner Manual instructions
Seat anchorages
Seat ass.emblies
Seat belt anchorages
Location/configuration of designated seats
Seat belt assemblies
Seat belt warning system
Original attachment locations

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 209 and FMVSS 209 cannot be determined based upon the components supplied by intermediate or final stage manufacturer, and Chevrolet makes no representation to conformity with the standard.

CMVSS 210 and FMVSS 210-SEAT BELT ASSEMBLY ANCHORAGES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document {unless otherwise noted on the cover}.

This incomplete vehicle, when completed, will conform to CMVSS 210 and FMVSS 210 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

- Seat assemblies
- Seat belt assemblies
- Floor pan assembly
- Seat belt routing
- Seat position/adjustment capability
- Owner Manual instructions
- Seat belt anchorage brackets, plates, and reinforcements
- Child restraint system including anchorages, brackets, plates and reinforcements
- B or C pillar structures
- Roof structure

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 210 and FMVSS 210 cannot be determined based upon the components supplied by intermediate or final stage manufacturer, and Chevrolet makes no representation to conformity with the standard.

CMVSS 302 and FMVSS 302- FLAMMABILITY OF INTERIOR MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 302 and FMVSS 302 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below, and installed by Chevrolet:

- Arm rests
- Compartment shelves
- Console
- Engine compartment covers
- Floor coverings
- Head restraints
- Headlining
- Instrument panel
- Rear Organizer
- Seat assemblies
- Seat backs
- Seat belts
- Seat cushions
- Shades
- Sun visors
- Wheel housing covers

All trim panels including door, front, rear and side panels.

NOTE: This list above includes any other interior materials, such as padding and crash deployed elements that are designed to absorb energy on contact by occupants in the event of a crash

PARTII

U.S. EPA, CALIFORNIA, AND CANADA EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA/ NHTSA / CANADA GREENHOUSE GAS EMISSIONS /FUEL ECONOMY REGULATIONS

Incomplete vehicles come in three major classifications: (1) Light Duty Vehicles, Light Duty Trucks, and Heavy Duty Vehicles (Including Medium Duty in California} are certified by the primary manufacturer and the vehicle is labeled as being in compliance with emission and fuel economy requirements. (2) Heavy Duty Vehicles are required to have an engine certified by the engine manufacturer and bear an engine emissions label, and if a gasoline vehicle bear an evaporative emissions label. (3) Light Duty Vehicles certified and labeled by the intermediate or final stage vehicle manufacturer as complying with emission and fuel economy requirements.

The incomplete vehicles contained in this document are classified as Heavy Duty Vehicles. The final stage manufacturer is responsible to not exceed the GVWR and GAWR listed on the incomplete vehicle certification label and to apply a Final Vehicle Certification Label. If any of these restrictions are exceeded, re-certification by the final stage manufacturer will be required.

In addition, all gasoline/gasoline-ethanol blend powered Federal/Callfornia Light Duty, Medium Duty and Heavy Duty Vehicles are required to have an approved fuel evaporative emission control system. Vehicles certified to Heavy Duty gasoline emission standards also require special evaporative emission labeling. In order to assure that Environmental Protection Agency (EPA), National Highway Traffic Safety Administration {NHTSA), California and Canada Emission Certification and/or Greenhouse Gas/Fuel Economy regulations are met, this vehicle must be completed in strict accordance with all instructions contained in this document, especially the following instructions which relate to:

- EMISSION RELATED COMPONENTS
- EVAPORATIVE EMISSION REQUIREMENTS
- FUEL PIPE AND FUEL NECKS (CALIFORNIA)
- LABELS
- EXTERIOR NOISE

EMISSION RELATED COMPONENTS

EXHAUST AND EVAPORATIVE REQUIREMENTS.

TYPE 1 The following statement is applicable to all models of incomplete vehides contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, conforms to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS providing no alterations are made which affect the function, physicat chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped), and installed by Chevrolet:

Air inlet system
Axles*2
Catalytic converter
Coolant temperature sensor
Crankcase emission control system
Engine assembly*2
Engine electronics (ECM/PCM/VCM)
Engine speed sensor
Exhaust system*2
Evaporative emission
control system (t)*l
Fuel injection system
Fuel system*2
Ignition system (t)
Intake manifold
MAF Sensor

EGR system
Exhaust emission control system
Charge Air Cooler and related system
Exhaust oxygen sensors {if equipped)
Diesel Particulate Filter(tt)

Tires*2
Transmission Control Module (TCM)*2
A/C System (if equipped)
Owner Manual instructions
Selective Catalytic Reduction System(tt)

t Gasoline engine ttoiesel engine

***1** All Federal/California gasoline powered heavy duty vehicles will have an evaporative emission control system that is certified for a fuel tank capacity not to exceed the amount shown on Vehicle Evaporative Emission Control Information Label.

*2 All Federal certified heavy duty vehicles are required to meet Federal Green House Gas (GHG) requirements. Please check the Vehicle Emission Label located either on driver's side door or inside the engine compartment.

ORIGINAL TIRES for compliance to GHG requirements are described in the Owners Manual.

Refer to the Owners Manual for replacing of tires.

EXHAUST SYSTEM

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unle.ss otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to 49 CFR Part 393.83 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems.

Vertical exhaust kit assembly provided by Chevrolet meets the Part 393.83 requirements, Chevrolet makes not statement of conformity with this standard for other vertical exhaust kits.

EVAPORATIVE EMISSION REQUIREMENTS.

TYPE 1 The following statement is applicable to all gasoline models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to applicable exhaust and evaporative emission requirements providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below, and installed by Chevrolet:

- Fuel Tank Assembly
- Fuel feed hoses front and rear
- Fuel return hoses front and rear
- Fuel tank filler hoses to filler neck
- Exhaust system
- Fuel tank vent hoses to filler neck
- Fuel vapor lines at canister
- Fuel vapor lines from engine to chassis pipes
- Fuel vapor lines from fuel tank sender to chassis pipes

SPECIFICATION FOR FILL PIPES AND OPENINGS OF MOTOR VEHICLE FUEL TANKS

(APPLICABLE ONLY TO CALIFORNIA GASOLINE/GASOLINE-ETHANOL BLEND POWERED VEHICLES)

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to Title 13, California Code of Regulations Section 2235, and the "Specifications for Fill Pipes and Openings of 2015 and subsequent Model Year Motor Vehicle Fuel Tanks", dated March 22, 2012, providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the fuel filler neck(s) and any intermediate or final stage manufacturer completes the fuel filler neck installation(s) according to the instructions which are furnished in the loose parts box.

LABELS

TYPE 2 The following statement is applicable to all types of incomplete vehicles contained in this document {unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA/NHTSA GREENHOUSE GAS EMISSIONS/FUEL ECONOMY REGULATION labeling requirements providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the Emission Control related Information Labels that are permanently affixed. The labels are required by government regulation and must not be obstructed from view or defaced so as to impair their visibility or legibility.

EXTERIOR NOISE

CMVSS 1106 - EXTERIOR NOISE

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to the above standards providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Air Induction System (tuning elements)
Alternator
Axles/halfshafts/propshaft
Catalytic converter and its location {if equipped)
Engine assembly
Exhaust System
Exterior noise generating devices
Exterior rearview mirror assemblies
Front of dash sound deadening material
Hood assembly including sound deadening material and seals
Intake system (i.e. Air filter, Mass Air flow (MAF) sensor, ducts))
Power steering pump
Powertrain control and logic
Powertrain cooling fan and motor assemblies
Radiator/condenser assembly to body seals
Tires (including correct tire pressure)
Transmission/Transaxle assembly
Underbody shields including air deflector
Wheel house liners and shields

Final compliance with CMVSS 1106 is the responsibility of the final stage manufacturer for any modifications, or added material, components, or systems..

PART III

CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD

INTERFERENCE CAUSING EQUIPMENT STANDARD (CANADA ONLY) - ICES-002

Applies to all models of Incomplete Vehicles contained in this document

TYPE 1 The following statement is applicable to all types of incomplete vehicles propelled by an internal combustion engine, electrical means or both contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the performance requirements of the above standard provided no alterations made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Ignition wires & plugs
Ignition coil(s)
Low voltage battery
Charging system
Spark plug wires
ECM/TCM/PCM
BCM/SDM

Each vehicle propelled by an internal combustion engine, electrical means or both shall bear a bi-lingual label that represents the manufacturer's Self-Declaration of Compliance (SDoC) to Innovation, Science and Economic Development Canada ICES-002. This label shall be permanently affixed to the vehicle propelled by an internal combustion engine, electrical means or both or displayed electronically and its text must be clearly legible.

The final stage manufacturer must provide a statement of compliance on the Final Stage Manufacturer's Compliance Label or an additional label with the following bilingual information in order to comply with Industry Canada's Interference Causing Equipment Standard ICES/NMB-002:

ICES/NMB-002

DOCUMENT FOR INCOMPLETE VEHICLE

APPLICABLE TO THE CHEVROLET 2024+ MY LCF

Isuzu Commercial Truck of America, Inc.
1400 S. Douglass Road, Suite 100
Anaheim, CA 92806

DO NOT REMOVE

THIS DOCUMENT MUST REMAIN WITH THIS VEHICLE UNTIL IT IS CERTIFIED AS A COMPLETED VEHICLE.

PLACE LABEL HERE

The Label affixed here includes the following information:

- The name of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR) expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear
- Tire size, rim size, cold tire pressure.

This document is furnished as required by the Canada Motor Vehicle Safety Act and United States (U.S.) Federal Motor Vehicle Safety Regulations (FMVSR) to aid intermediate and final stage manufacturers in their determination of conformity of the completed vehicle with applicable Canada Motor Vehicle Safety Standards (CMVSS), U.S. Federal Motor Vehicle Safety Standards (FMVSS), Canadian On-Road Vehicle and Engine Emission Regulations and Canada Interference Causing Equipment Standard – ICES-002. Also included are instructions, which must be followed in order to assure that U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB)* emission certification requirements and U.S. National Highway Traffic Safety Administration (NHTSA) Fuel Economy Regulations and Canada/U.S. EPA Greenhouse Gas Regulations are met.

This label attached to this document will indicate this vehicle was manufactured by Builtmore Contract Manufacturing, a division of The SHYFT Group, Inc under a contractual agreement with Chevrolet. All inquiries regarding the content of this document should be forwarded to Chevrolet through the www.gmupfitter.com website.

This document is not a substitute for knowledge and understanding of the requirements of the Canada Motor Vehicle Safety Act, Federal Motor Vehicle Safety Regulations (FMVSR); or applicable Canada Motor Vehicle Safety Standards (CMVSS) and U.S. Federal Motor Vehicle Safety Standards (FMVSS). Intermediate and final stage manufacturers should be familiar with the Regulations and Standards referred to above to be aware of their specific responsibilities as they relate to the final destination and sale of each incomplete vehicle.

Any intermediate or final stage manufacturer making material alterations to this incomplete vehicle during the process of manufacturing the complete vehicle should be constantly vigilant to recognize all effects, either direct or indirect, on other components, assemblies or systems caused by any alteration. No alteration should be made to the incomplete vehicle that directly or indirectly results in any component, assembly or system being in nonconformance with any applicable Canada Motor Vehicle Safety Standard or U.S. Federal Motor Vehicle Safety Standard or Emission Regulation or Fuel Economy/Greenhouse Gas Regulation.

The statements contained in this Incomplete Vehicle Document are accurate as of the date of manufacture of the Incomplete Vehicle and can be relied on by any intermediate and/or final stage manufacturer as a basis for certification.

*Please see the Vehicle Emission Control Information to identify if the vehicle is California certified.

INTRODUCTION

This document contains information relative to conformance of this incomplete vehicle with the following:

Part I – U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS

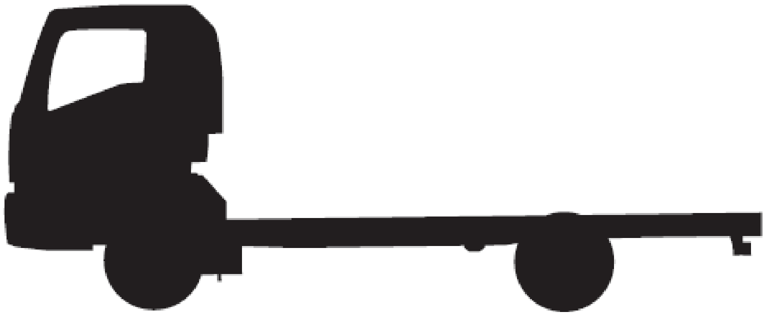
Part II – U.S. EPA, CALIFORNIA, AND CANADA EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA / NHTSA / CANADA GREENHOUSE GAS EMISSIONS/FUEL ECONOMY REGULATIONS

Part III – CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD

This document pertains to the following styles of truck:

MODEL

6500 XD
7500 XD



4 × 2

**NOTE: Incomplete vehicle can be built into straight truck type vocational vehicles.
It cannot be built into a Truck Tractor**

*Emission Certification:

To verify if the incomplete vehicle is California emission certified, please locate the Vehicle Emission Control Information label generally located in the driver door area. The compliance statement on the label must say "This vehicle complies with U.S. EPA and California regulations." If the label only states U.S. EPA regulations, then the vehicle is not California certified.

PART I

U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS

This section contains a list of Canada Motor Vehicle Safety Standard (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS), followed by a section entitled "Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). An appropriate statement of applicability is made for each standard, and by vehicle model as it relates to the incomplete vehicle.

The identifiers TYPE 1, TYPE 2 or TYPE 3 prefix statements (of applicability) regarding Canada Motor Vehicle Safety Standards (CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). "Examples" of these statements follow:

TYPE 1 **A statement that the vehicle when completed will conform to the standard if no alterations are made in identified components of the incomplete vehicle. EXAMPLE: This vehicle when complete will conform to CMVSS 104 and FMVSS No. 104, Windshield Wiping and Washing Systems, if no alterations are made in the windshield wiper components.**

TYPE 2 **A statement of specific conditions of final manufacture under which the manufacturer specifies that the completed vehicle will conform to the standard. EXAMPLE: This vehicle when completed will conform to CMVSS 121 and FMVSS 121, Air Brake Systems, if it does not exceed any of the gross axle weight ratings, if the center of gravity at GVWR is not higher than ## feet above the ground, and if no alterations are made to any brake system component.**

TYPE 3 **A statement that conformity with the standard cannot be determined based upon the components supplied on the incomplete vehicle, and that the incomplete vehicle manufacturer makes no representation to conformity with the standard.**

In accordance with the requirements of Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations Part 568.4, the following information is included on the label affixed to the front cover of this document:

- The name and mailing address of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR) expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear.

In addition, the final stage manufacturer is responsible under Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations and Part 567.5, to place the GVWR and the GAWR of each axle, on the Final Vehicle Certification Label. Required on label is the "Gross Vehicle Weight Rating" or "GVWR" followed by the appropriate value in kilograms and (pounds), which shall not be less than the sum of the unloaded vehicle weight, rated cargo load, and 68 kg (150 lb.) times the number of the vehicle's designated seating positions.

Unloaded Vehicle Weight means the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo or occupants or accessories that are ordinarily removed from the vehicle when they are not in use.

During the completion of this vehicle, GVWR and GAWR may be affected in various ways, including but not limited to the following:

- The installation of a body or equipment that exceeds the rated capacities of the incomplete vehicle.
- The addition of designated seating positions that exceed the rated capacities of the incomplete vehicle.
- Alterations or substitution of any components such as axles, springs, tires, wheels, frames, steering and brake systems that may affect the rated capacities of the incomplete vehicle.

PART I – CHART A

LIST OF CANADA MOTOR VEHICLE SAFETY STANDARDS (CMVSS), AND FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS), APPLICABLE TO GASOLINE OR DIESEL – FUELED TRUCKS WITH A GVWR OF GREATER THAN 4536 kg (10,000 lb)

SEE STATEMENTS REGARDING CMVSS AND FMVSS ON PAGES THAT FOLLOW

CMVSS	FMVSS	TITLE	F*R
CMVSR Sec 6-7	Part 567**	Labeling and Documentation Requirements	3
101	101	Controls and displays	1
102	102	Transmission shift lever sequence, starter interlock and transmission braking effect	1
103	103	Windshield defrosting and defogging systems	1
104	104	Windshield wiping and washing systems	1
106	106	Brake hoses, Hydraulic, air and vacuum	1
108	-	Daytime Running Lights	2
108	108	Lamps, reflective devices and associated equipment	2
111	111	Mirrors and Rearview Visibility Systems	1
113	113	Hood Latch System	1
115	Part 565 **	Vehicle Identification Number	1
119	119	New pneumatic tires	1
120	120	Tire selection and rims	2
121	121	Air Brake Systems	1
124	124	Accelerator control systems	1
-	125	Warning devices designed to be carried in motor vehicles	3
136	136	Electronic Stability Systems for Heavy Vehicles	3
205	205	Glazing materials	1
206	206	Door locks and door retention components	1
207	207	Seating systems	1
208	208	Occupant Crash Protection	1,3
209	209	Seat belt assemblies	1,3
210	210	Seat belt assembly anchorages	1,3
302	302	Flammability of interior materials	1
ICES-002	-	Canada interference causing equipment standard [PART III]	1
1106	NA	Noise Emissions [PART II]	1

*** TYPE 1, 2 or 3 numbers to the right hand side of the table above designate the appropriate paragraph in the CMVSS or FMVSS standards that follow.**

**** CFR Title 49 Transportation Part 565, Part 567**

Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS).

CMVSR SEC. 6 and 49 CFR 567 LABELING AND DOCUMENTATION REQUIREMENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of Incomplete Vehicles contained in this document.

This incomplete vehicle, when completed in stages by an intermediate and final stage manufacturer will comply with the requirements of Part 567 or the CMVSR Section 6, when the intermediate and final stage manufactures provide additional labeling to meet these requirements.

CMVSS 101 and FMVSS 101 – CONTROLS AND DISPLAYS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of Incomplete Vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 101 and FMVSS 101 providing no alterations are made which affect the size, location, identification, or illumination of the controls and displays identified or the location, travel and type of driver’s seat. If the driver’s seat is installed by the intermediate or final stage manufacturer, the “H” point must be located as shown in the “Body Builder Manuals” and visibility and operation of the controls and displays listed below must meet the requirements of the standard.

The following controls must be operable, and the following displays for the following functions and malfunctions shall be fitted in such a manner that they are identifiable, by the driver while the driver is seated in the driver’s designated seating position with the driver’s seat belt fastened around the driver in accordance with the manufacturer’s instructions:

Hand operated controls (if equipped):

Automatic vehicle speed (cruise control)
Automatic transmission shift lever
Clearance lamps (switch)
Driver’s Sunvisor
Engine Idle Speed
Engine Start
Engine Stop
Hazard warning signal
Hazard warning switch
Headlamps
Headlamp high or low beam switch
Heating and air conditioning fan
Heating and air conditioning system
Horn control
Identification lamps (switch)
Ignition (switch)
Illumination intensity control
Master lighting switch
Position, side marker, end-outline marker, identification or clearance lamps
Service brake
Steering wheel
Tail lamps
Turn signal
Windshield defogging and defrosting systems
Windshield washer (washing system)
Windshield wiper (wiping system)

Foot operated controls (if equipped):

- Accelerator
- Park brake (pedal)
- Service brake (pedal)

Displays (if equipped):

- Air brake low pressure
- Air bag system readiness
- Antilock brake system malfunction
- Battery charging condition
- Brake lining wear-out condition
- Brake system malfunction (*)
- Brake failure warning
- Diesel Particulate Filter Gauge
- Diesel Exhaust Fluid Gauge
- Electrical charge indicator
- Engine oil pressure
- Fuel level
- Gross loss of brake pressure condition
- Hazard warning signal
- Engine coolant temperature display
- Gear position
- Headlamp high beam
- Low fuel indicator
- Low brake air pressure telltale
- Low brake fluid condition
- Odometer (*)
- Parking brake applied
- Passenger air bag status
- Seat belt (unfastened telltale)
- Speedometer (*)
- Transmission control position
- Turn signal(s)
- Variable brake proportioning system malfunction
- Multi information display (MID)

* For CMVSS only, when Canadian option is specified.

If the intermediate or final stage manufacturer installs any of the above controls and displays, those controls and displays will also have to meet the requirements of this standard.

CMVSS 102 and FMVSS 102 – TRANSMISSION SHIFT LEVER SEQUENCE, STARTER INTERLOCK AND TRANSMISSION BRAKING EFFECT

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 102 and FMVSS 102 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Automatic Transmission (A/T) control and identification system, including but not limited to:

- A/T gear shift sequence and control logic (electrical or mechanical)
- A/T steering column assembly
- A/T control from floor shift mechanism to transmission linkage
- A/T floor shift mechanism
- A/T neutral safety switch assembly and wire
- A/T position indicator dial
- Brake – A/T interlock controls
- Engine starter interlock controls
- Vehicle & Chassis wiring harnesses
- A/T position indicator (pointer)
- A/T position indicator actuating linkage
- Automatic transmission assembly
- Transmission shift position pattern (knob, plate or label)

CMVSS 103 and FMVSS 103 – WINDSHIELD DEFROSTING AND DEFOGGING SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 103 and FMVSS 103 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Windshield defrosting and defogging systems, including but not limited to:

- Chassis and instrument panel wiring harness assembly
- Defroster air distributor assembly (manifold)
- Defroster air duct assembly
- Defroster air hoses – manifold to nozzle
- Defroster air to windshield outlet assembly (nozzle)
- Defroster outlet to heater assembly adapter
- Engine water outlet thermostat assembly
- Heater & defroster assembly – including motor & blower
- Heater & defroster control (mechanical)
- Heater blower motor resistor assembly (blower speed control)
- Heater & water hoses and hose assemblies
- Heater water inlet valve control
- Windshield assembly

CMVSS 104 and FMVSS 104 – WINDSHIELD WIPING AND WASHER SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 104 and FMVSS 104 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Windshield wiping and washing systems, including but not limited to:

- Chassis wiring harness
- Washer reservoir cap
- Water reservoir filler assembly
- Windshield assembly
- Windshield wiper arm assembly
- Windshield wiper blade assembly
- Windshield wiper linkage assembly
- Windshield wiper and washer control
- Windshield wiper and washer motor and pump assembly
- Windshield washer fluid reservoir
- Windshield washer system hoses
- Windshield washer nozzle

CMVSS 106 and FMVSS 106 – BRAKE HOSES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 106 and FMVSS 106 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Hydraulic Air, and Vacuum Brake Hoses
Hoses and hose end fittings
Labeling requirements
Brake Hose Assemblies – and Brake Hose End Fittings

CMVSS 108 – DAYTIME RUNNING LIGHTS

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed will conform to the Daytime Running Lamps (DRL) requirements of CMVSS108 providing no alterations are made to the ignition switch, DRL system components or wiring, and any vehicle forward, side, or rear lighting as manufactured by Chevrolet.

CMVSS 108 and FMVSS 108 – LAMPS, REFLECTIVE DEVICES AND ASSOCIATED EQUIPMENT

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 108 and FMVSS 108 providing it is completed in accordance with the following specific conditions by the final stage manufacturer:

1. Body width must be a minimum of 2.032 m (80′′).

2. Each of these devices must be properly installed on the completed vehicle and meet all the requirements of CMVSS 108 and FMVSS 108:
   a. The following devices, when provided, located and/or wired by Chevrolet meet the requirements of this standard.

      Headlamps or Daytime running lamps (DRL)
      Cab roof clearance and ID lamps (front)
      Side marker lamp (Front)
      Side reflex reflectors (front)
      Turn signal flasher
      Turn signal lamps (front)
      Turn signal operating unit
      Vehicle hazard warning signal operating unit
      Vehicle hazard warning signal flasher

b. The following lamps and reflective devices are temporarily mounted on this incomplete vehicle as required for transportation. When relocating them, intermediate or final stage manufacturers must refer to the Body Builders Manual and assure conformance with the location, visibility, and operational requirements of CMVSS 108 and FMVSS 108.

License plate lamp
Rear combination lamps (tail lamps, stop lamps, turn signal lamps and back-up lamps)
Reflex reflectors (rear)
Daytime Running Lamps

c. No part of the completed vehicle shall be installed so as to prevent any of the devices listed in (a) or (b) above from meeting their required photometric output at the specified test points. If such interference exists, the applicable devices may have to be relocated or additional devices added to meet the requirements of CMVSS 108 and FMVSS 108:

Any CMVSS 108 and FMVSS 108 part shall not be painted.

d. The following devices are not installed on this incomplete vehicle or supplied by Chevrolet. When added by intermediate or final stage manufacturers, they must also meet the requirements of CMVSS 108 and FMVSS 108:

Clearance lamps (rear)
Identification lamps (rear)
Side reflex reflectors (rear)
Side marker lamps (rear)

e. The following additional devices must be installed on the van body and meet all requirements of this standard if the overall vehicle length is 9.1 m (30 feet) or greater.

Intermediate side marker lamps
Intermediate side reflex reflectors

3. No alterations (other than any relocation of Items in 2) b.) which may be necessary for conformance to CMVSS 108 and FMVSS 108 should be made which affect the location, mounting surfaces, function, environment or visibility clearance of the above listed devices which have been installed on this incomplete vehicle.

CMVSS 111 and FMVSS 111 – REARVIEW MIRRORS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to FMVSS 111 providing no alterations or substitutions are made to the outside rearview mirrors, the driver's seat location is not altered, and the body is installed symmetrical about the vehicle centerline. The overall width should be no greater than;

Model	Width Limit millimeter (inches)	Width Limit with 102'' wide mirror brackets millimeter (inches)
F*R	2438 mm (96'')	2590 mm (102'')

CMVSS 113 and FMVSS 113 – HOOD LATCH SYSTEM

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 113 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped)

Hood	Hood Latch System

CMVSS 115 and 49 CFR 565 – VEHICLE IDENTIFICATION NUMBER

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 115 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Vehicle Identification Number (VIN)	VIN label or plate VIN plate fasteners

CMVSS119 and FMVSS119 - NEW PNEUMATIC TIRES FOR MOTOR VEHICLES WITH A GVWR OF MORE THAN 4,536 KILOGRAMS (10,000 POUNDS)

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS119 and FMVSS119 providing no alternation are made which affect the function, physical, chemical or mechanical properties, environment, location or vital spatial clearance of the components, assemblies or systems including but not limited to those listed below:

Tires	Wheels

CMVSS 120 and FMVSS 120 – TIRE SELECTION AND RIMS FOR VEHICLES OTHER THAN PASSENGER CARS

Applies to all models of incomplete vehicles contained in this document

TYPE 2 **The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).**

This incomplete vehicle, when completed, will conform to CMVSS 120 and FMVSS 120 provided:

A. No alterations are made which affect the function, physical or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to:

Owner Manual Instructions
Tires
Wheels

B. GVWR, GAWR front and rear weight ratings as listed on the incomplete vehicle label affixed to the front cover of this document are not exceeded.

C. The tire and wheel information shown on the incomplete vehicle label must be transferred to the final stage manufacturer's Certification label or Tire Information Label providing no equipment or tire pressure changes are made and the final stage manufacturer labels the vehicle in compliance with CMVSS 120 and FMVSS120.

NOTE: Incomplete Vehicles referenced in this document may be shipped with reduced tire pressures for shipping purposes only. Inflate tires to specified pressure before delivery to customers.

CMVSS 121 and FMVSS 121 – AIR BRAKE SYSTEMS

Applies to all models of incomplete vehicles contained in this book

TYPE 1 The following statement is applicable to all types of incomplete vehicles equipped with Air Brakes and contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, if equipped with air brakes, when completed, will conform to CMVSS 121 and FMVSS 121, providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Air brake systems, including but not limited to:

Air brake chambers and slack adjusters
Air brake lines, fittings, and routing including gauges and warning devices
Air brake reservoirs
Air brake valves and components
Air compressor and drive
Anti-Lock brake system
Brake assemblies and components
Brake pedal and mechanical components, including switch
Brake System gauges and warning devices
Spring brake chambers and actuation valve
Tires and wheel speed sensors, and wheel speed sensor wiring
Wheelbase

The maximum vertical center of gravity of the total vehicle at maximum GVWR is not exceeded:

Application	Maximum Center of Gravity millimeter (inches) above ground
F*R	1778 mm (70")

CMVSS 124 and FMVSS 124 – ACCELERATOR CONTROL SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 124 and FMVSS 124 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Accelerator/throttle control systems, including but not limited to:

Accelerator pedal and attachments
Accelerator lever and supporting bracket assembly
Accelerator cable, support brackets, and seals
Accelerator return spring(s)
Attachment to injection pump lever - pin, hole, or ball stud
Downshift switch
Idling control cable assembly

FMVSS 125 –WARNING DEVICES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to FMVSS 125 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Warning devices (if equipped)

Safety warning triangles
Fire Extinguisher
Backup Alarm

CMVSS 136 and FMVSS 136 – ELECTRONIC STABILITY CONTROL SYSTEMS FOR HEAVY VEHICLES

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

Conformity with CMVSS 136 and FMVSS 136 cannot be determined upon the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

This incomplete vehicle has not been built, tested, or manufactured with an electronic stability control system.

NOTE: This incomplete vehicle cannot be built into a Truck Tractor.

CMVSS 205 and FMVSS 205 – GLAZING MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 205 and FMVSS 205 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Glazing material
Monogram
Driver's Side Reference Point (SgRP)
Visibility of the monogram
Windshield shade banding

Final compliance with CMVSS 205 and FMVSS 205 is the responsibility of the final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS 206 and FMVSS 206 – DOOR LOCKS AND DOOR RETENTION COMPONENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 206 and FMVSS 206 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Door lock
Door latch
Door latch striker plate
Door hinge
Inside lock control linkage
Exterior door handles

Final compliance with CMVSS 206 and FMVSS 206 is the responsibility of the final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS 207 and FMVSS 207 – ANCHORAGE OF SEATS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 207 and FMVSS 207 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Seating systems, including but not limited to:

Floor pan assemblies
Folding seat or seat back latch assembly
Seat adjuster assembly
Seat anchorage's brackets reinforcements, attachment hardware, etc.
Seat assembly
Seat or seat back latch assembly
Seat or seat back latch release control
Seat or seat back latch striker
Seat riser

CMVSS 208 and FMVSS 208 – OCCUPANT CRASH PROTECTION

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the seat belt provision sections of CMVSS 208 and FMVSS 208 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrolet including but not limited to:

Owner Manual instructions
Seat anchorages
Seat assemblies
Seat belt anchorages
Location/configuration of designated seats
Seat belt assemblies
Seat belt warning system

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 208 and FMVSS 208 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

CMVSS 209 and FMVSS 209 – SEAT BELT ASSEMBLIES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the CMVSS 209 and FMVSS 209 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrolet including but not limited to:

Owner Manual instructions
Seat anchorages
Seat assemblies
Seat belt anchorages
Location/configuration of designated seats
Seat belt assemblies
Seat belt warning system
Original attachment locations

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 209 and FMVSS 209 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

CMVSS 210 and FMVSS 210 – SEAT BELT ASSEMBLY ANCHORAGES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 210 and FMVSS 210 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Seat assemblies
Seat belt assemblies
Floor pan assembly
Seat belt routing
Seat position/adjustment capability
Owner Manual instructions
Seat belt anchorage brackets, plates, and reinforcements
Child restraint system including anchorages, brackets, plates and reinforcements
B or C pillar structures
Roof structure

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 210 and FMVSS 210 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

CMVSS 302 and FMVSS 302 – FLAMMABILITY OF INTERIOR MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 302 and FMVSS 302 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below, and installed by Chevrolet:

Arm rests
Compartment shelves
Console
Engine compartment covers
Floor coverings
Head restraints
Headlining
Instrument panel
Rear Organizer
Seat assemblies
Seat backs
Seat belts
Seat cushions
Shades
Sun visors
Wheel housing covers

All trim panels including door, front, rear and side panels.

NOTE: This list above includes any other interior materials, such as padding and crash deployed elements that are designed to absorb energy on contact by occupants in the event of a crash

PART II

U.S. EPA, CALIFORNIA, AND CANADA EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA / NHTSA / CANADA GREENHOUSE GAS EMISSIONS /FUEL ECONOMY REGULATIONS

Incomplete vehicles come in three major classifications: (1) Light Duty Vehicles, Light Duty Trucks, and Heavy Duty Vehicles (Including Medium Duty in California) are certified by the primary manufacturer and the vehicle is labeled as being in compliance with emission and fuel economy requirements. (2) Heavy Duty Vehicles are required to have an engine certified by the engine manufacturer and bear an engine emissions label, and if a gasoline vehicle bear an evaporative emissions label. (3) Light Duty Vehicles certified and labeled by the intermediate or final stage vehicle manufacturer as complying with emission and fuel economy requirements.

The incomplete vehicles contained in this document are classified as Heavy Duty Vehicles. The final stage manufacturer is responsible to not exceed the GVWR and GAWR listed on the incomplete vehicle certification label and to apply a Final Vehicle Certification Label. If any of these restrictions are exceeded, re-certification by the final stage manufacturer will be required.

In addition, all gasoline/gasoline-ethanol blend powered Federal/California Light Duty, Medium Duty and Heavy Duty Vehicles are required to have an approved fuel evaporative emission control system. Vehicles certified to Heavy Duty gasoline emission standards also require special evaporative emission labeling. In order to assure that Environmental Protection Agency (EPA), National Highway Traffic Safety Administration (NHTSA), California and Canada Emission Certification and/or Greenhouse Gas/Fuel Economy regulations are met, this vehicle must be completed in strict accordance with all instructions contained in this document, especially the following instructions which relate to:

- EMISSION RELATED COMPONENTS
- EVAPORATIVE EMISSION REQUIREMENTS
- FUEL PIPE AND FUEL NECKS (CALIFORNIA)
- LABELS
- EXTERIOR NOISE

EMISSION RELATED COMPONENTS

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, conforms to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped), and installed by Chevrolet:

Air inlet system
Axles*2
Catalytic converter
Coolant temperature sensor
Crankcase emission control system
Engine assembly*2
Engine electronics (ECM/PCM/VCM)
Engine speed sensor
Exhaust system*2
Evaporative emission
  control system (†)*1
Fuel injection system
Fuel system*2
Ignition system (†)
Intake manifold
MAF Sensor

EGR system
Exhaust emission control system
Charge Air Cooler and related system
Exhaust oxygen sensors (if equipped)
Tires*2
Transmission Control Module (TCM)*2
A/C System(if equipped)
Owner Manual instructions

† Gasoline engine

*1 All Federal/California gasoline powered heavy duty vehicles will have an evaporative emission control system that is certified for a fuel tank capacity not to exceed the amount shown on Vehicle Evaporative Emission Control Information Label.

*2 All Federal certified heavy duty vehicles are required to meet Federal Green House Gas (GHG) requirements. Please check the Vehicle Emission Label located either on driver's side door or inside the engine compartment.

Conformance to U.S. EPA, California, and Canadian Exhaust & Green House Gas Emission requirements and restrictions for these incomplete vehicles.

ORIGINAL TIRES for compliance to GHG requirements are described in the Owners Manual.

Refer to the Owners Manual for tire replacement.

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any tires installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with vocational vehicle GHG above 19,500 GVWR and at or below 33,000 GVWR cannot be determined based upon the components not supplied by Chevrolet on the incomplete vehicle and Chevrolet makes no representation to conformity with the standard.

EVAPORATIVE EMISSION REQUIREMENTS.

All models of incomplete vehicles contained in this book are operated on diesel fuel. Evaporative emissions are not required

SPECIFICATION FOR FILL PIPES AND OPENINGS OF MOTOR VEHICLE FUEL TANKS

(APPLICABLE ONLY TO CALIFORNIA GASOLINE/GASOLINE-ETHANOL BLEND POWERED VEHICLES)

LABELS

TYPE 2 The following statement is applicable to all types of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA/NHTSA GREENHOUSE GAS EMISSIONS/FUEL ECONOMY REGULATION labeling requirements providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the Emission Control related Information Labels that are permanently affixed. The labels are required by government regulation and must not be obstructed from view or defaced so as to impair their visibility or legibility.

EXTERIOR NOISE

CMVSS 1106 – EXTERIOR NOISE

Applies to all models of incomplete vehicles contained in this document

TYPE 1 **The following statement is applicable to all models of incomplete vehicles (unless otherwise noted on the cover of this document).**

This incomplete vehicle, when completed, will conform to the above standards providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

- Air Induction System (tuning elements)
- Alternator
- Axles/halfshafts/propshaft
- Catalytic converter and its location (if equipped)
- Engine assembly
- Exhaust & After treatment Systems
- Exterior noise generating devices
- Exterior rearview mirror assemblies
- Front of dash sound deadening material
- Hood assembly including sound deadening material and seals
- Intake system (i.e. Air filter, Mass Air flow (MAF) sensor, ducts))
- Power steering pump
- Powertrain control and logic
- Powertrain cooling fan and motor assemblies
- Radiator/condenser assembly to body seals
- Tires (including correct tire pressure)
- Transmission/Transaxle assembly
- Underbody shields including air deflector
- Wheel house liners and shields

Final compliance with CMVSS 1106 is the responsibility of the final stage manufacturer for any modifications, or added material, components, or systems.

PART III

CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD

INTERFERENCE CAUSING EQUIPMENT STANDARD (CANADA ONLY) – ICES-002

Applies to all models of Incomplete Vehicles contained in this document

TYPE 1 The following statement is applicable to all types of incomplete vehicles propelled by an internal combustion engine, electrical means or both contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the performance requirements of the above standard provided no alterations made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below: (if equipped)

- Ignition wires & plugs
- Ignition coil(s)
- Low voltage battery
- Charging system
- Spark plug wires
- ECM/TCM/PCM
- BCM/SDM

Each vehicle propelled by an internal combustion engine, electrical means or both shall bear a bi-lingual label that represents the manufacturer's Self-Declaration of Compliance (SDoC) to Innovation, Science and Economic Development Canada ICES-002. This label shall be permanently affixed to the vehicle propelled by an internal combustion engine, electrical means or both or displayed electronically and its text must be clearly legible.

The final stage manufacturer must provide a statement of compliance on the Final Stage Manufacturer’s Compliance Label or an additional label with the following bilingual information in order to comply with Industry Canada’s Interference Causing Equipment Standard ICES/NMB-002:

ICES/NMB-002

DOCUMENT FOR INCOMPLETE VEHICLE

APPLICABLE TO THE CHEVROLET 2024+ MY LCF SERIES

Isuzu Commercial Truck of America, Inc.
1400 S. Douglass Road, Suite 100
Anaheim, CA 92806

DO NOT REMOVE

THIS DOCUMENT MUST REMAIN WITH THIS VEHICLE UNTIL IT IS CERTIFIED AS A COMPLETED VEHICLE.

PLACE LABEL HERE

The Label affixed here includes the following information:

- The name of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR) expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear
- Tire size, rim size, cold tire pressure.

This document is furnished as required by the Canada Motor Vehicle Safety Act and United States (U.S.) Federal Motor Vehicle Safety Regulations (FMVSR) to aid intermediate and final stage manufacturers in their determination of conformity of the completed vehicle with applicable Canada Motor Vehicle Safety Standards (CMVSS), U.S. Federal Motor Vehicle Safety Standards (FMVSS), Canadian On-Road Vehicle and Engine Emission Regulations and Canada Interference Causing Equipment Standard – ICES-002. Also included are instructions, which must be followed in order to assure that U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) emission certification requirements and U.S. National Highway Traffic Safety Administration (NHTSA) Fuel Economy Regulations and Canada/U.S. EPA Greenhouse Gas Regulations are met.

This label attached to this document will indicate this vehicle was manufactured by Builtmore Contract Manufacturing, a division of The SHYFT Group, Inc under a contractual agreement with Chevrolet. All inquiries regarding the content of this document should be forwarded to through the www.gmupfitter.com website.

This document is not a substitute for knowledge and understanding of the requirements of the Canada Motor Vehicle Safety Act, Federal Motor Vehicle Safety Regulations (FMVSR); or applicable Canada Motor Vehicle Safety Standards (CMVSS) and U.S. Federal Motor Vehicle Safety Standards (FMVSS). Intermediate and final stage manufacturers should be familiar with the Regulations and Standards referred to above to be aware of their specific responsibilities as they relate to the final destination and sale of each incomplete vehicle.

Any intermediate or final stage manufacturer making material alterations to this incomplete vehicle during the process of manufacturing the complete vehicle should be constantly vigilant to recognize all effects, either direct or indirect, on other components, assemblies or systems caused by any alteration. No alteration should be made to the incomplete vehicle that directly or indirectly results in any component, assembly or system being in nonconformance with any applicable Canada Motor Vehicle Safety Standard or U.S. Federal Motor Vehicle Safety Standard or Emission Regulation or Fuel Economy/Greenhouse Gas Regulation.

The statements contained in this Incomplete Vehicle Document are accurate as of the date of manufacture of the Incomplete Vehicle and can be relied on by any intermediate and/or final stage manufacturer as a basis for certification.

INTRODUCTION

This document contains information relative to conformance of this incomplete vehicle with the following:

Part I – **U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS**

Part II – **U.S. ENVIRONMENTAL PROTECTION AGENCY, STATE OF CALIFORNIA, AND CANADA EMISSION REQUIREMENTS AND NHTSA FUEL ECONOMY REQUIREMENTS, AND CANADA/ U.S. EPA GREENHOUSE GAS REGULATIONS**

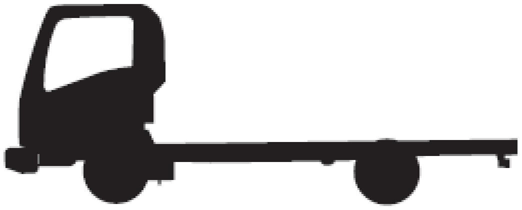
Part III – **CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD**

This document pertains to the following styles of truck:

Single cab model

MODEL

GASOLINE
3500 HG
4500 HG
5500 HG
5500 XD

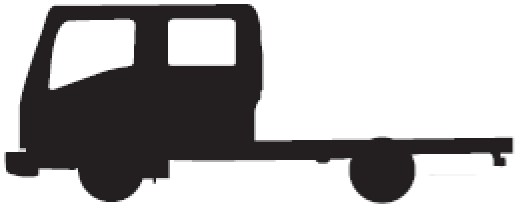


4 × 2

Crew cab model

MODEL

GASOLINE
3500 HG
4500 HG
5500 HG
5500 XD



4 × 2

**NOTE: Incomplete vehicle can be built into straight truck type vocational vehicles.
It cannot be built into a Truck Tractor or a Bus**

PART I

U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND CANADA MOTOR VEHICLE SAFETY STANDARDS

This section contains a list of Canada Motor Vehicle Safety Standard (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS), followed by a section entitled “Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). An appropriate statement of applicability is made for each standard, and by vehicle model as it relates to the incomplete vehicle.

The identifiers TYPE 1, TYPE 2 or TYPE 3 prefix statements (of applicability) regarding Canada Motor Vehicle Safety Standards (CMVSS), and Federal Motor Vehicle Safety Standards (FMVSS). “Examples” of these statements follow:

TYPE 1 **A statement that the vehicle when completed will conform to the standard if no alterations are made in identified components of the incomplete vehicle. EXAMPLE: This vehicle when complete will conform to CMVSS 104 and FMVSS No. 104, Windshield Wiping and Washing Systems, if no alterations are made in the windshield wiper components.**

TYPE 2 **A statement of specific conditions of final manufacture under which the manufacturer specifies that the completed vehicle will conform to the standard. EXAMPLE: This vehicle when completed will conform to CMVSS 121 and FMVSS 121, Air Brake Systems, if it does not exceed any of the gross axle weight ratings, if the center of gravity at GVWR is not higher than ## feet above the ground, and if no alterations are made to any brake system component.**

TYPE 3 **A statement that conformity with the standard cannot be determined based upon the components supplied on the incomplete vehicle, and that the incomplete vehicle manufacturer makes no representation to conformity with the standard.**

In accordance with the requirements of Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations Part 568.4, the following information is included on the label affixed to the front cover of this document:

- The name and mailing address of the incomplete vehicle manufacturer;
- The month and year the incomplete vehicle manufacturer performed its last manufacturing operation on the incomplete vehicle;
- The vehicle identification number (VIN);
- The Gross Vehicle Weight Rating (GVWR) expressed in kg (lb), intended for the vehicle when it is a completed vehicle;
- The Gross Axle Weight Rating (GAWR) expressed in kg (lb), intended for each axle of the vehicle when it is a completed vehicle, listed in order from front to rear.

In addition, the final stage manufacturer is responsible under Canada Motor Vehicle Safety Regulations, and Federal Motor Vehicle Safety Regulations and Part 567.5, to place the GVWR and the GAWR of each axle, on the Final Vehicle Certification Label. Required on label is the "Gross Vehicle Weight Rating" or "GVWR" followed by the appropriate value in kilograms and (pounds), which shall not be less than the sum of the unloaded vehicle weight, rated cargo load, and 68 kg (150 lb.) times the number of the vehicle's designated seating positions, if known. However, for school buses the minimum occupant weight allowance shall be 54.4 kg (120 lb.) per passenger and 68 kg (150 lb.) for the driver.

Unloaded Vehicle Weight means the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo or occupants or accessories that are ordinarily removed from the vehicle when they are not in use.

During the completion of this vehicle, GVWR and GAWR may be affected in various ways, including but not limited to the following:

- The installation of a body or equipment that exceeds the rated capacities of the incomplete vehicle.
- The addition of designated seating positions that exceed the rated capacities of the incomplete vehicle.
- Alterations or substitution of any components such as axles, springs, tires, wheels, frames, steering and brake systems that may affect the rated capacities of the incomplete vehicle.

PART I – CHART A

LIST OF CANADA MOTOR VEHICLE SAFETY STANDARDS (CMVSS), AND FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS), APPLICABLE TO GASOLINE OR DIESEL – FUELED TRUCKS WITH A GVWR OF GREATER THAN 4536 kg (10,000 lb)

SEE STATEMENTS REGARDING CMVSS AND FMVSS ON PAGES THAT FOLLOW

CMVSS	FMVSS	TITLE	3500/4500HG GASOLINE	5500HG/5500XG GASOLINE
CMVSR Sec 6-7	Part 567**	Labeling and Documentation Requirements	3	3
101	101	Controls and displays	1	1
102	102	Transmission shift lever sequence, starter interlock and transmission braking effect	1	1
103	103	Windshield defrosting and defogging systems	1	1
104	104	Windshield wiping and washing systems	1	1
105	105	Hydraulic brake systems	2	2
106	106	Brake hoses, Hydraulic, air and vacuum	1	1
108	-	Daytime Running Lights	1	1
108	108	Lamps, reflective devices and associated equipment	2	2
111	111	Mirrors and Rearview Visibility Systems	1	1
113	113	Hood Latch System	1	1
115	Part 565 **	Vehicle Identification Number	1	1
116	116	Motor-vehicle brake fluids	1	1
119	119	New pneumatic tires	1	1
120	120	Tire selection and rims	2	2
124	124	Accelerator control systems	1	1
-	125	Warning devices designed to be carried in motor vehicles	1	1
136	136	Electronic Stability Systems for Heavy Vehicles	3	3
205	205	Glazing materials	1	1
206	206	Door locks and door retention components	1	1
207	207	Seating systems	1	1
208	208	Occupant Crash Protection	1,3	1,3
209	209	Seat belt assemblies	1,3	1,3
210	210	Seat belt assembly anchorages	1,3	1,3
302	302	Flammability of interior materials	1	1
ICES-002	-	Canada interference causing equipment standard	1	1
1106	NA	Noise Emissions	1	1

*** TYPE 1, 2 or 3 numbers to the right hand side of the table above designate the appropriate paragraph in the CMVSS or FMVSS standards that follow.**

**** CFR Title 49 Transportation Part 565, Part 567**

Statements Regarding Canada Motor Vehicle Safety Standards (CMVSS), and U.S. Federal Motor Vehicle Safety Standards (FMVSS).

CMVSR SEC. 6 and 49 CFR 567 LABELING AND DOCUMENTATION REQUIREMENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of Incomplete Vehicles contained in this document.

This incomplete vehicle, when completed in stages by an intermediate and final stage manufacturer will comply with the requirements of Part 567 or the CMVSR Section 6, when the intermediate and final stage manufactures provide additional labeling to meet these requirements.

CMVSS 101 and FMVSS 101 – CONTROLS AND DISPLAYS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of Incomplete Vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 101 and FMVSS 101 providing no alterations are made which affect the size, location, identification, or illumination of the controls and displays identified or the location, travel and type of driver’s seat. If the driver’s seat is installed by the intermediate or final stage manufacturer, the “H” point must be located as shown in the “Body Builder Manuals” and visibility and operation of the controls and displays listed below must meet the requirements of the standard.

The following controls must be operable, and the following displays for the following functions and malfunctions shall be fitted in such a manner that they are identifiable, by the driver while the driver is seated in the driver’s designated seating position with the driver’s seat belt fastened around the driver in accordance with the manufacturer’s instructions:

Hand operated controls (if equipped):

Automatic vehicle speed (cruise control)
Automatic transmission shift lever
Clearance lamps (switch)
Driver’s Sunvisor
Engine Idle Speed
Engine Start
Engine Stop
Hazard warning signal
Hazard warning switch
Headlamps
Headlamp high or low beam switch
Heating and air conditioning fan
Heating and air conditioning system
Horn control
Identification lamps (switch)
Ignition (switch)
Illumination intensity control
Master lighting switch
Position, side marker, end-outline marker, identification or clearance lamps
Service brake
Steering wheel
Tail lamps
Turn signal
Windshield defogging and defrosting systems
Windshield washer (washing system)
Windshield wiper (wiping system)

Foot operated controls (if equipped):

Accelerator
Park brake (pedal)
Service brake (pedal)

Displays (if equipped):

Air brake low pressure
Air bag system readiness
Antilock brake system malfunction
Battery charging condition
Brake lining wear-out condition
Brake system malfunction (*)
Brake failure warning
Electrical charge indicator
Engine oil pressure
Fuel level
Gross loss of brake pressure condition
Hazard warning signal
Engine coolant temperature display
Gear position
Headlamp high beam
Low fuel indicator
Low brake air pressure telltale
Low brake fluid condition
Odometer (*)
Parking brake applied
Passenger air bag status
Seat belt (unfastened telltale)
Speedometer (*)
Transmission control position
Turn signal(s)
Variable brake proportioning system malfunction
Multi information display (MID)

* For CMVSS only, when Canadian option is specified.

If the intermediate or final stage manufacturer installs any of the above controls and displays, those controls and displays will also have to meet the requirements of this standard.

CMVSS 102 and FMVSS 102 – TRANSMISSION SHIFT LEVER SEQUENCE, STARTER INTERLOCK AND TRANSMISSION BRAKING EFFECT

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 102 and FMVSS 102 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Automatic Transmission (A/T) control and identification system, including but not limited to:

A/T gear shift sequence and control logic (electrical or mechanical)
A/T steering column assembly
A/T control from floor shift mechanism to transmission linkage
A/T floor shift mechanism
A/T neutral safety switch assembly and wire
A/T position indicator dial
Brake – A/T interlock controls
Engine starter interlock controls
Vehicle & Chassis wiring harnesses
A/T position indicator (pointer)
A/T position indicator actuating linkage
Automatic transmission assembly
Transmission shift position pattern (knob, plate or label)

CMVSS 103 and FMVSS 103 – WINDSHIELD DEFROSTING AND DEFOGGING SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all incomplete vehicle models contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 103 and FMVSS 103 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Windshield defrosting and defogging systems, including but not limited to:

Chassis and instrument panel wiring harness assembly
Defroster air distributor assembly (manifold)
Defroster air duct assembly
Defroster air hoses – manifold to nozzle
Defroster air to windshield outlet assembly (nozzle)
Defroster outlet to heater assembly adapter
Engine water outlet thermostat assembly
Heater & defroster assembly – including motor & blower
Heater & defroster control (mechanical)
Heater blower motor resistor assembly (blower speed control)
Heater & water hoses and hose assemblies
Heater water inlet valve control
Windshield assembly

CMVSS 104 and FMVSS 104 – WINDSHIELD WIPING AND WASHER SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 104 and FMVSS 104 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Windshield wiping and washing systems, including but not limited to:

Chassis wiring harness
Washer reservoir cap
Water reservoir filler assembly
Windshield assembly
Windshield wiper arm assembly
Windshield wiper blade assembly
Windshield wiper linkage assembly
Windshield wiper and washer control
Windshield wiper and washer motor and pump assembly
Windshield washer fluid reservoir
Windshield washer system hoses
Windshield washer nozzle

CMVSS 105 and FMVSS 105 – HYDRAULIC BRAKE SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, if equipped with hydraulic brakes, when completed, will conform to CMVSS 105 and FMVSS 105 providing no alterations are made which affect the function, physical or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems identified below. In addition, the maximum vertical center of gravity specified below must not be exceeded at maximum GVWR and rated front and rear GAWR.

Application	Maximum Center of Gravity millimeter (inches) above ground
NPR/ NPR-HD Gas	1600 mm (63")
NQR/NRR Gas	

Hydraulic Brake Systems, including but not limited to:

Hydraulic brake lines, fittings and routings including gauges, warning devices and warning statements
Hydraulic brake valves and components
Hydraulic brake reservoir
Service and/or parking brake assemblies and components
(Power boosters, master cylinder, ABS module, calipers, wheel cylinders, etc.)
Tires
Wheelbases
Brake pedal, brake light switch, parking brake hand level and switch, and related mechanical components
Brake and ABS warning light
Vacuum pump, tank, pipes and hoses (including warning devices and statements)
Master cylinder reservoir warning statement
Hydraulic booster pump, pipes, hoses and reservoir (including warning devices)

CMVSS 106 and FMVSS 106 – BRAKE HOSES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 106 and FMVSS 106 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Hydraulic Air, and Vacuum Brake Hoses
Hoses and hose end fittings
Labeling requirements
Brake Hose Assemblies – and Brake Hose End Fittings

CMVSS 108 – DAYTIME RUNNING LIGHTS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed will conform to the Daytime Running Lamps (DRL) requirements of CMVSS108 providing no alterations are made to the ignition switch, DRL system components or wiring, and any vehicle forward lighting as manufactured by Chevrole

CMVSS 108 and FMVSS 108 – LAMPS, REFLECTIVE DEVICES AND ASSOCIATED EQUIPMENT

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 108 and FMVSS 108 providing it is completed in accordance with the following specific conditions by the final stage manufacturer:

1. Body width must be between 2.032 m (80′′) and 2.438 m (96′′). (2.184 m (86′′) MIN Body Width For Crew Cab).

2. Each of these devices must be properly installed on the completed vehicle and meet all the requirements of CMVSS 108 and FMVSS 108:

a. The following devices, when provided, located and/or wired by Chevrole meet the requirements of this standard.

Headlamps or Daytime running lamps
Cab roof clearance and ID lamps (front)
Side marker lamp (Front)
Side reflex reflectors (front)
Turn signal flasher
Turn signal lamps (front)
Turn signal operating unit
Vehicle hazard warning signal operating unit
Vehicle hazard warning signal flasher

b. The following lamps and reflective devices are temporarily mounted on this incomplete vehicle as required for transportation. When relocating them, intermediate or final stage manufacturers must refer to the Body Builders Manual and assure conformance with the location, visibility, and operational requirements of CMVSS 108 and FMVSS 108.

License plate lamp

Rear combination lamps (tail lamps, stop lamps, turn signal lamps and back-up lamps)

Reflex reflectors (rear)

c. No part of the completed vehicle shall be installed so as to prevent any of the devices listed in (a) or (b) above from meeting their required photometric output at the specified test points. If such interference exists, the applicable devices may have to be relocated or additional devices added to meet the requirements of CMVSS 108 and FMVSS 108:

Any CMVSS 108 and FMVSS 108 part shall not be painted.

d. The following devices are not installed on this incomplete vehicle or supplied by Chevrole. When added by intermediate or final stage manufacturers, they must also meet the requirements of CMVSS 108 and FMVSS 108:

Clearance lamps (rear)
Identification lamps (rear)
Side reflex reflectors (rear)
Side marker lamps (rear)

e. The following additional devices must be installed on the van body and meet all requirements of this standard if the overall vehicle length is 9.1 m (30 feet) or greater.

Intermediate side marker lamps
Intermediate side reflex reflectors

3. No alterations (other than any relocation of Items in 2) b.) which may be necessary for conformance to CMVSS 108 and FMVSS 108 should be made which affect the location, mounting surfaces, function, environment or visibility clearance of the above listed devices which have been installed on this incomplete vehicle.

CMVSS 111 and FMVSS 111 – REARVIEW MIRRORS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to FMVSS 111 providing no alterations or substitutions are made to the outside rearview mirrors, the driver's seat location is not altered, and the body is installed symmetrical about the vehicle centerline. The overall width should be no greater than;

Model	Width Limit millimeter (inches)	Width Limit with 102'' wide mirror brackets millimeter (inches)
NPR / NPR-HD Gas NQR / NRR Gas	2438 mm (96'')	2590 mm (102'')

CMVSS 113 and FMVSS 113 – HOOD LATCH SYSTEM

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 113 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped)

Hood
Hood Latch System

CMVSS 115 and 49 CFR 565 – VEHICLE IDENTIFICATION NUMBER

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 115 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Vehicle Identification Number (VIN)	VIN label or plate
	VIN plate fasteners

CMVSS 116 and FMVSS 116 – MOTOR VEHICLE BRAKE FLUIDS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when equipped with approved hydraulic brake fluid will conform to CMVSS 116 and FMVSS 116 providing no alterations are made which affect the physical or chemical properties of the brake fluid.

CMVSS 119 and FMVSS 119 - NEW PNEUMATIC TIRES FOR MOTOR VEHICLES WITH A GVWR OF MORE THAN 4,536 KILOGRAMS (10,000 POUNDS)

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS119 and FMVSS119 providing no alternation are made which affect the function, physical, chemical or mechanical properties, environment, location or vital spatial clearance of the components, assemblies or systems including but not limited to those listed below:

Tires	Wheels

CMVSS 120 and FMVSS 120 – TIRE SELECTION AND RIMS FOR VEHICLES OTHER THAN PASSENGER CARS

Applies to all models of incomplete vehicles contained in this document

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 120 and FMVSS 120 provided:

A. No alterations are made which affect the function, physical or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to:

Owner Manual Instructions
Wheels
Tires

B. GVWR, GAWR front and rear weight ratings as listed on the incomplete vehicle label affixed to the front cover of this document are not exceeded.

C. The tire and wheel information shown on the incomplete vehicle label must be transferred to the final stage manufacturer's Certification label or Tire Information Label providing no equipment or tire pressure changes are made and the final stage manufacturer labels the vehicle in compliance with CMVSS 120 and FMVSS120.

NOTE: Incomplete Vehicles referenced in this document may be shipped with reduced tire pressures for shipping purposes only. Inflate tires to specified pressure before delivery to customers.

CMVSS 124 and FMVSS 124 – ACCELERATOR CONTROL SYSTEMS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 124 and FMVSS 124 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Accelerator/throttle control systems, including but not limited to: (for Gasoline Vehicles)

Accelerator pedal and attachments
Accelerator lever and supporting bracket assembly
Accelerator return spring(s)

FMVSS 125 –WARNING DEVICES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to FMVSS 125 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Warning devices (if equipped)

Safety warning triangles
Fire Extinguisher
Backup Alarm

CMVSS 136 and FMVSS 136 – ELECTRONIC STABILITY CONTROL SYSTEMS FOR HEAVY VEHICLES

Applies to all models of incomplete vehicles contained in this document

TYPE 3 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

Conformity with CMVSS 136 and FMVSS 136 cannot be determined upon the components supplied on the incomplete vehicle, and Chevrole makes no representation to conformity with the standard.

This incomplete vehicle has not been built, tested, or manufactured with an electronic stability control system.

NOTE: This incomplete vehicle cannot be built into a Truck Tractor.

CMVSS 205 and FMVSS 205 – GLAZING MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 205 and FMVSS 205 providing no alterations are made which affect the function, physical chemical, or mechanical properties, environment, location, or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Glazing material
Monogram
Driver's Side Reference Point (SgRP)
Visibility of the monogram
Windshield shade banding

Final compliance with CMVSS 205 and FMVSS 205 is the responsibility of the final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS 206 and FMVSS 206 – DOOR LOCKS AND DOOR RETENTION COMPONENTS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 206 and FMVSS 206 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Door lock
Door latch
Door latch striker plate
Door hinge
Inside lock control linkage
Exterior door handles

Final compliance with CMVSS 206 and FMVSS 206 is the responsibility of the final stage manufacturer for any modifications, or added material, parts, components, or systems.

CMVSS 207 and FMVSS 207 – ANCHORAGE OF SEATS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to CMVSS 207 and FMVSS 207 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Seating systems, including but not limited to:

Floor pan assemblies
Folding seat or seat back latch assembly
Seat adjuster assembly
Seat anchorage's brackets reinforcements, attachment hardware, etc.
Seat assembly
Seat or seat back latch assembly
Seat or seat back latch release control
Seat or seat back latch striker
Seat riser

CMVSS 208 and FMVSS 208 – OCCUPANT CRASH PROTECTION

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the seat belt provision sections of CMVSS 208 and FMVSS 208 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrole including but not limited to:

- Owner Manual instructions
- Seat anchorages
- Seat assemblies
- Seat belt anchorages
- Location/configuration of designated seats
- Seat belt assemblies
- Seat belt warning system

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 208 and FMVSS 208 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrole makes no representation to conformity with the standard.

CMVSS 209 and FMVSS 209 – SEAT BELT ASSEMBLIES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the CMVSS 209 and FMVSS 209 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems installed by Chevrole including but not limited to:

- Owner Manual instructions
- Seat anchorages
- Seat assemblies
- Seat belt anchorages
- Location/configuration of designated seats
- Seat belt assemblies
- Seat belt warning system
- Original attachment locations

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 209 and FMVSS 209 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrole makes no representation to conformity with the standard.

CMVSS 210 and FMVSS 210 – SEAT BELT ASSEMBLY ANCHORAGES

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 210 and FMVSS 210 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Seat assemblies
Seat belt assemblies
Floor pan assembly
Seat belt routing
Seat position/adjustment capability
Owner Manual instructions
Seat belt anchorage brackets, plates, and reinforcements
Child restraint system including anchorages, brackets, plates and reinforcements
B or C pillar structures
Roof structure

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any seats, seat belt assemblies or seat belt assembly anchorages installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with CMVSS 210 and FMVSS 210 cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrole makes no representation to conformity with the standard.

CMVSS 302 and FMVSS 302 – FLAMMABILITY OF INTERIOR MATERIALS

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to CMVSS 302 and FMVSS 302 providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below, and installed by Chevrole:

Arm rests
Compartment shelves
Console
Engine compartment covers
Floor coverings
Head restraints
Headlining
Instrument panel
Rear Organizer
Seat assemblies
Seat backs
Seat belts
Seat cushions
Shades
Sun visors
Wheel housing covers

All trim panels including door, front, rear and side panels.

NOTE: This list above includes any other interior materials, such as padding and crash deployed elements that are designed to absorb energy on contact by occupants in the event of a crash

PART II

U.S. EPA, CALIFORNIA, AND CANADA EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA / NHTSA / CANADA GREENHOUSE GAS EMISSIONS /FUEL ECONOMY REGULATIONS

Incomplete vehicles come in three major classifications: (1) Light Duty Vehicles, Light Duty Trucks, and Heavy Duty Vehicles (Including Medium Duty in California) are certified by the primary manufacturer and the vehicle is labeled as being in compliance with emission and fuel economy requirements. (2) Heavy Duty Vehicles are required to have an engine certified by the engine manufacturer and bear an engine emissions label, and if a gasoline vehicle bear an evaporative emissions label. (3) Light Duty Vehicles certified and labeled by the intermediate or final stage vehicle manufacturer as complying with emission and fuel economy requirements.

The incomplete vehicles contained in this document are classified as Heavy Duty Vehicles. The final stage manufacturer is responsible to not exceed the GVWR and GAWR listed on the incomplete vehicle certification label and to apply a Final Vehicle Certification Label. If any of these restrictions are exceeded, re-certification by the final stage manufacturer will be required.

In addition, all gasoline/gasoline-ethanol blend powered Federal/California Light Duty, Medium Duty and Heavy Duty Vehicles are required to have an approved fuel evaporative emission control system. Vehicles certified to Heavy Duty gasoline emission standards also require special evaporative emission labeling. In order to assure that Environmental Protection Agency (EPA), National Highway Traffic Safety Administration (NHTSA), California and Canada Emission Certification and/or Greenhouse Gas/Fuel Economy regulations are met, this vehicle must be completed in strict accordance with all instructions contained in this document, especially the following instructions which relate to:

- EMISSION RELATED COMPONENTS
- EVAPORATIVE EMISSION REQUIREMENTS
- FUEL PIPE AND FUEL NECKS (CALIFORNIA)
- LABELS
- EXTERIOR NOISE

EMISSION RELATED COMPONENTS

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, conforms to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped), and installed by Chevrole:

Air inlet system
Axles*2
Catalytic converter
Coolant temperature sensor
Crankcase emission control system
Engine assembly*2
Engine electronics (ECM/PCM/VCM)
Engine speed sensor
EGR system
Exhaust system*2
Evaporative emission
  control system (†)*1
Fuel injection system
Fuel system*2
Ignition system (†)
Intake manifold
MAF Sensor
Tires*2

Exhaust emission control system	Transmission Control Module (TCM)*2
Charge Air Cooler and related system	A/C System(if equipped)
Exhaust oxygen sensors (if equipped)	Owner Manual instructions

† Gasoline engine

*1 All Federal/California gasoline powered heavy duty vehicles will have an evaporative emission control system that is certified for a fuel tank capacity not to exceed the amount shown on Vehicle Evaporative Emission Control Information Label.

*2 All Federal certified heavy duty vehicles are required to meet Federal Green House Gas (GHG) requirements. Please check the Vehicle Emission Label located either on driver's side door or inside the engine compartment.

Conformance to U.S. EPA, California, and Canadian Exhaust & Green House Gas Emission requirements and restrictions for these incomplete vehicles.

ORIGINAL TIRES for compliance to GHG requirements are described in the Owners Manual.

Refer to the Owners Manual for replacing of tires.

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to any tires installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with vocational vehicle GHG at or below 19,500 GVWR cannot be determined based upon the components supplied on the incomplete vehicle, and Chevrole makes no representation to conformity with the standard.

EVAPORATIVE EMISSION REQUIREMENTS.

TYPE 1 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to applicable exhaust and evaporative emission requirements providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below, and installed by Chevrole:

- Fuel Tank Assembly
- Fuel feed hoses front and rear
- Fuel return hoses front and rear
- Fuel tank filler hoses to filler neck
- Exhaust system
- Fuel tank vent hoses to filler neck
- Fuel vapor lines at canister
- Fuel vapor lines from engine to chassis pipes
- Fuel vapor lines from fuel tank sender to chassis pipes

SPECIFICATION FOR FILL PIPES AND OPENINGS OF MOTOR VEHICLE FUEL TANKS

(APPLICABLE ONLY TO CALIFORNIA GASOLINE/GASOLINE-ETHANOL BLEND POWERED VEHICLES)

TYPE 2 The following statement is applicable to all models of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to Title 13, California Code of Regulations Section 2235, and the “Specifications for Fill Pipes and Openings of 2015 and subsequent Model Year Motor Vehicle Fuel Tanks”, dated March 22, 2012, providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the fuel filler neck(s) and any intermediate or final stage manufacturer completes the fuel filler neck installation(s) according to the instructions which are furnished in the loose parts box.

TYPE 3 The following statement is applicable to all types of incomplete vehicles contained in this document with respect to fuel neck assemblies installed by the intermediate or final stage manufacturer (unless otherwise noted on the cover).

Conformity with California’s SPECIFICATION FOR FILL PIPES AND OPENINGS OF MOTOR VEHICLE FUEL TANKS cannot be determined based on the components supplied on the incomplete vehicle, and Chevrolet makes no representation to conformity with the standard.

LABELS

TYPE 2 The following statement is applicable to all types of incomplete vehicles contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to U.S. EPA, CALIFORNIA, AND CANADIAN EXHAUST & EVAPORATIVE EMISSION REQUIREMENTS AND EPA/NHTSA GREENHOUSE GAS EMISSIONS/FUEL ECONOMY REGULATION labeling requirements providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the Emission Control related Information Labels that are permanently affixed. The labels are required by government regulation and must not be obstructed from view or defaced so as to impair their visibility or legibility.

EXTERIOR NOISE

CMVSS 1106 – EXTERIOR NOISE

Applies to all models of incomplete vehicles contained in this document

TYPE 1 The following statement is applicable to all models of incomplete vehicles (unless otherwise noted on the cover of this document).

This incomplete vehicle, when completed, will conform to the above standards providing no alterations are made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below (if equipped):

Air Induction System (tuning elements)
Alternator
Axles/halfshafts/propshaft
Catalytic converter and its location
  (if equipped)
Engine assembly
Exhaust System
Exterior noise generating devices
Exterior rearview mirror assemblies
Front of dash sound deadening material
Hood assembly including sound deadening
  material and seals
Intake system (i.e. Air filter,
  Mass Air flow (MAF) sensor, ducts))
Power steering pump
Powertrain control and logic
Powertrain cooling fan and motor assemblies
Radiator/condenser assembly to body seals
Tires (including correct tire pressure)
Transmission/Transaxle assembly
Underbody shields including air deflector
Wheel house liners and shields

Final compliance with CMVSS 1106 is the responsibility of the final stage manufacturer for any modifications, or added material, components, or systems.

PART III

CANADA INTERFERENCE CAUSING EQUIPMENT STANDARD

INTERFERENCE CAUSING EQUIPMENT STANDARD (CANADA ONLY) – ICES-002

Applies to all models of Incomplete Vehicles contained in this document

TYPE 1 The following statement is applicable to all types of incomplete vehicles propelled by an internal combustion engine, electrical means or both contained in this document (unless otherwise noted on the cover).

This incomplete vehicle, when completed, will conform to the performance requirements of the above standard provided no alterations made which affect the function, physical, chemical, or mechanical properties, environment, location or vital spatial clearances of the components, assemblies or systems including but not limited to those listed below:

Ignition wires & plugs
Ignition coil(s)
Low voltage battery
Charging system
Spark plug wires
ECM/TCM/PCM
BCM/SDM

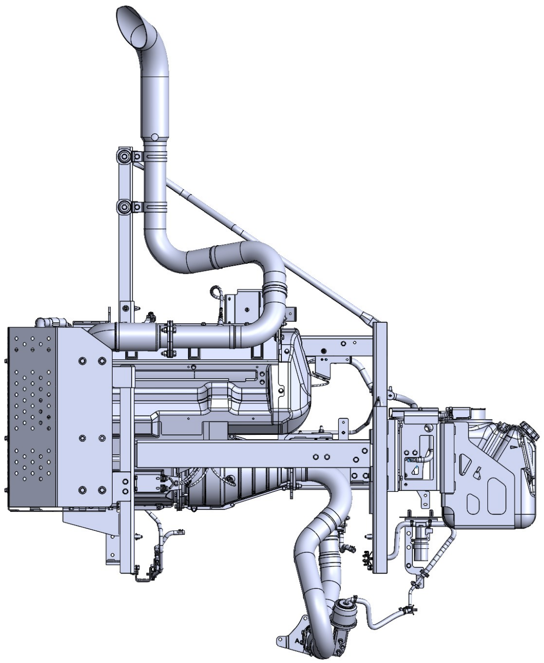
Each vehicle propelled by an internal combustion engine, electrical means or both shall bear a bi-lingual label that represents the manufacturer's Self-Declaration of Compliance (SDoC) to Innovation, Science and Economic Development Canada ICES-002. This label shall be permanently affixed to the vehicle propelled by an internal combustion engine, electrical means or both or displayed electronically and its text must be clearly legible.

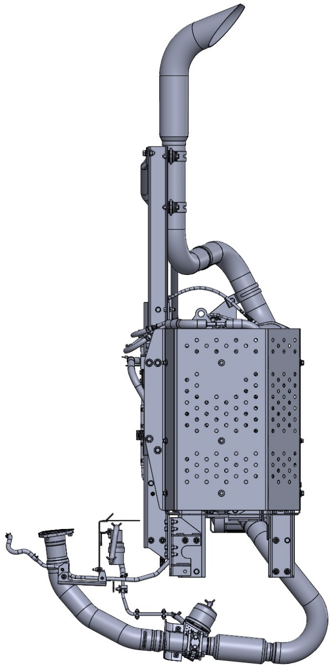
The final stage manufacturer must provide a statement of compliance on the Final Stage Manufacturer’s Compliance Label or an additional label with the following bilingual information in order to comply with Industry Canada’s Interference Causing Equipment Standard ICES/NMB-002:

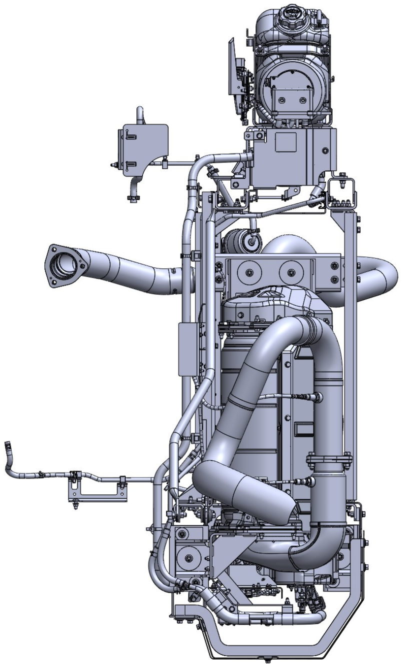
ICES/NMB-002

LCF Series Vertical Exhaust

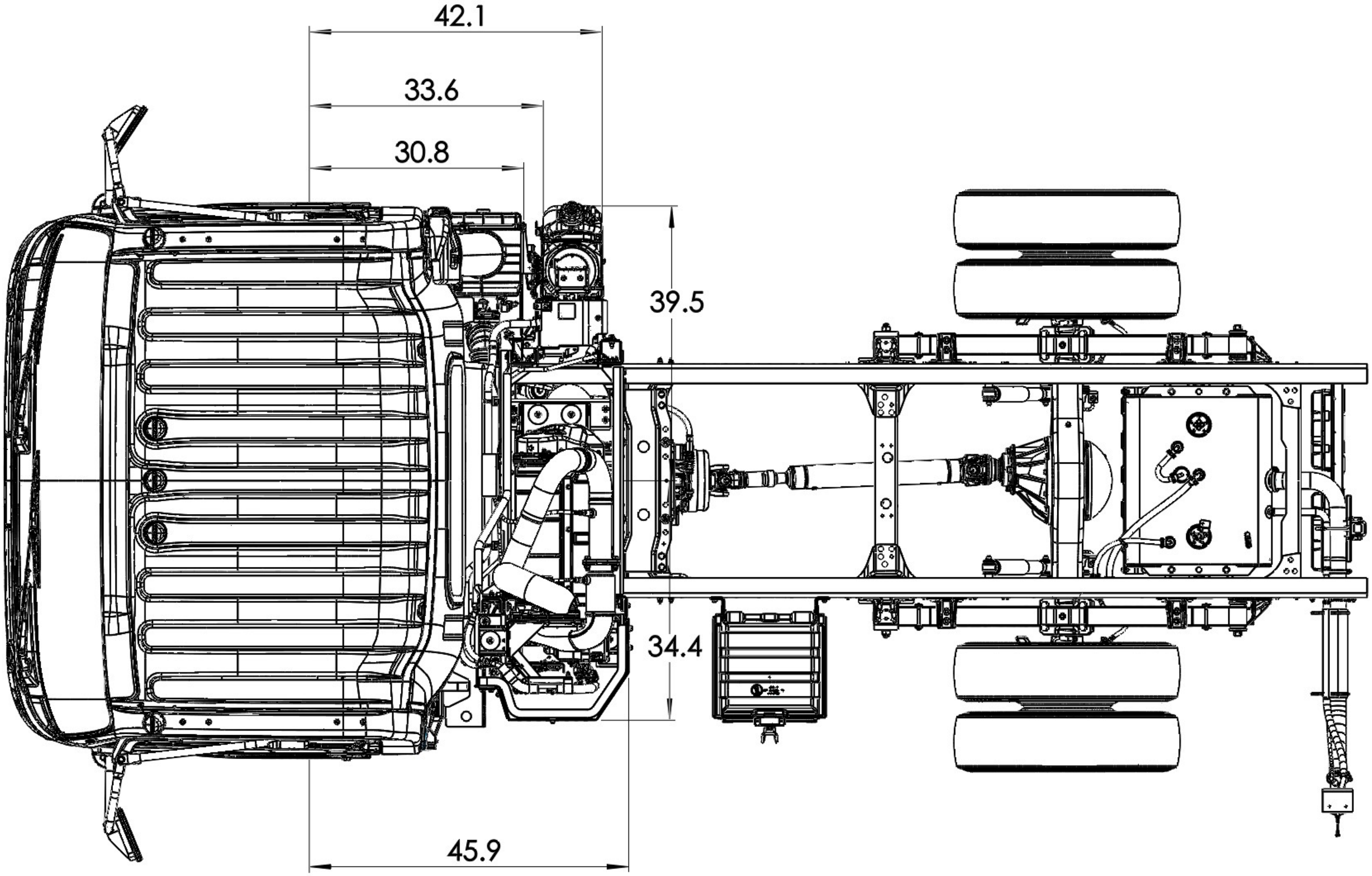
- Available on 4500 HG 14,500 GVW,4500 XD 16,000 GVW, 5500 HD DERATE 17,950 GVW, and 550 HD 19,500 GVW
- Vertical exhaust is available on 109, 132.5, 150, 176, 200, and 212 inch wheelbases
- Option Code I0A
- Not available on gas engine models
- Available as a port installed option only
- Available with in rail fuel tank only
- Available with single cab only



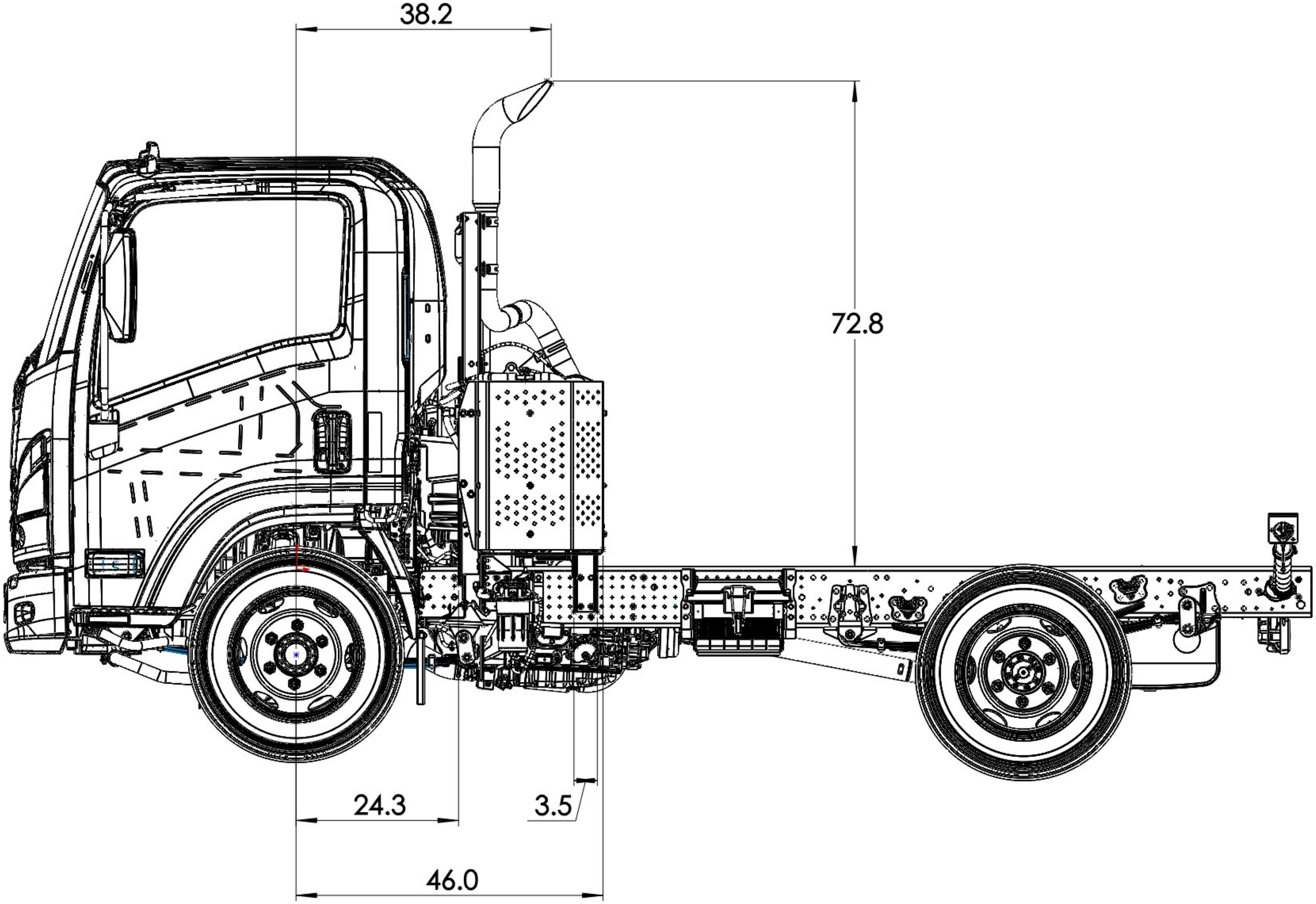




Vertical Exhaust - Top View


42.1
33.6
30.8
39.5
34.4
45.9

Vertical Exhaust - Driver Side View


38.2
72.8
24.3
3.5
46.0

6500 & 7600 *Single Cab - Side View*

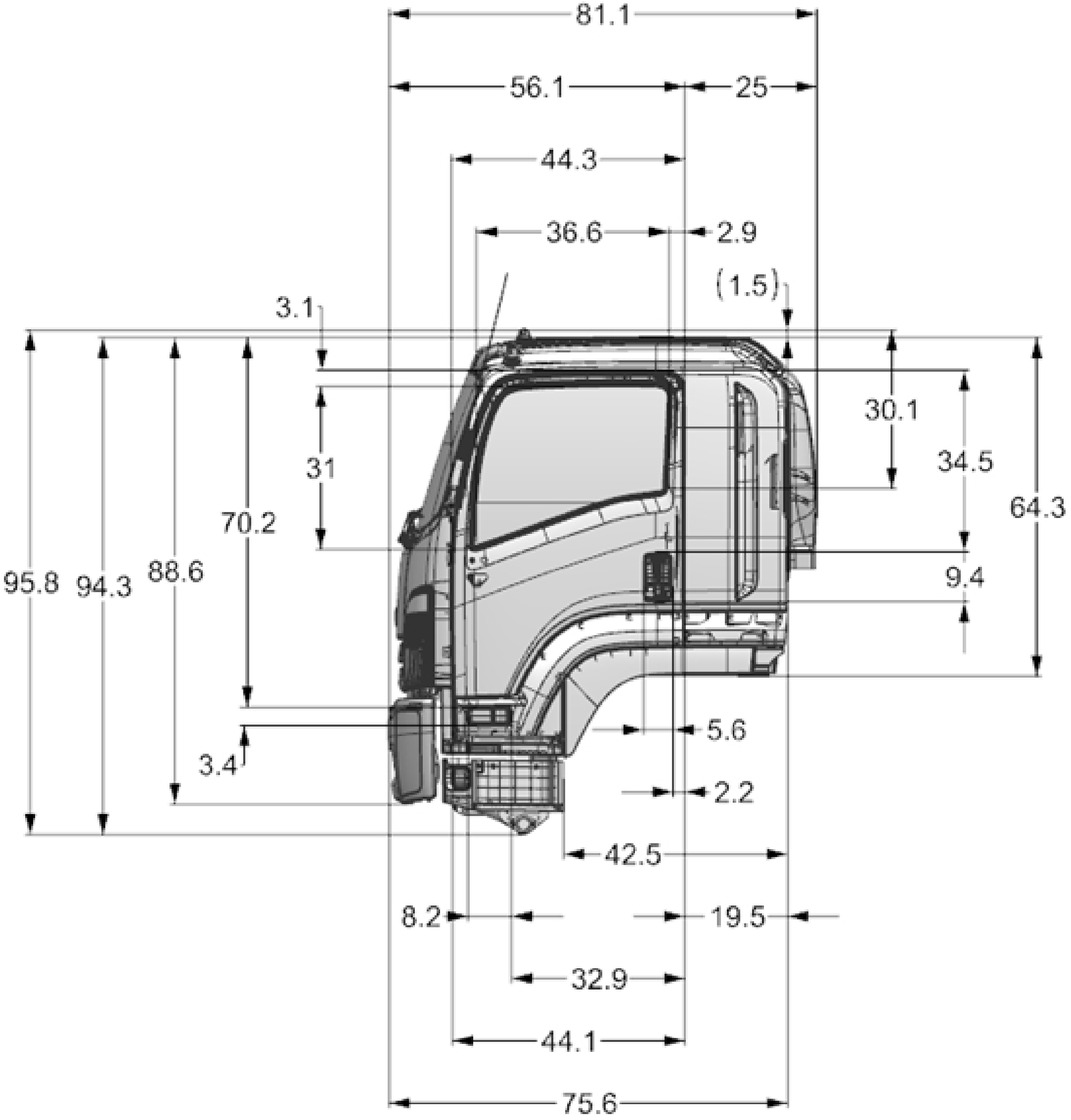

81.1
56.1
25
44.3
36.6
2.9
(1.5)
3.1
31
70.2
95.8
94.3
88.6
3.4
30.1
34.5
64.3
9.4
5.6
2.2
42.5
8.2
19.5
32.9
44.1
75.6

Figure 1

Dimensions in inches

6500 & 7500 *Single Cab - Front View*

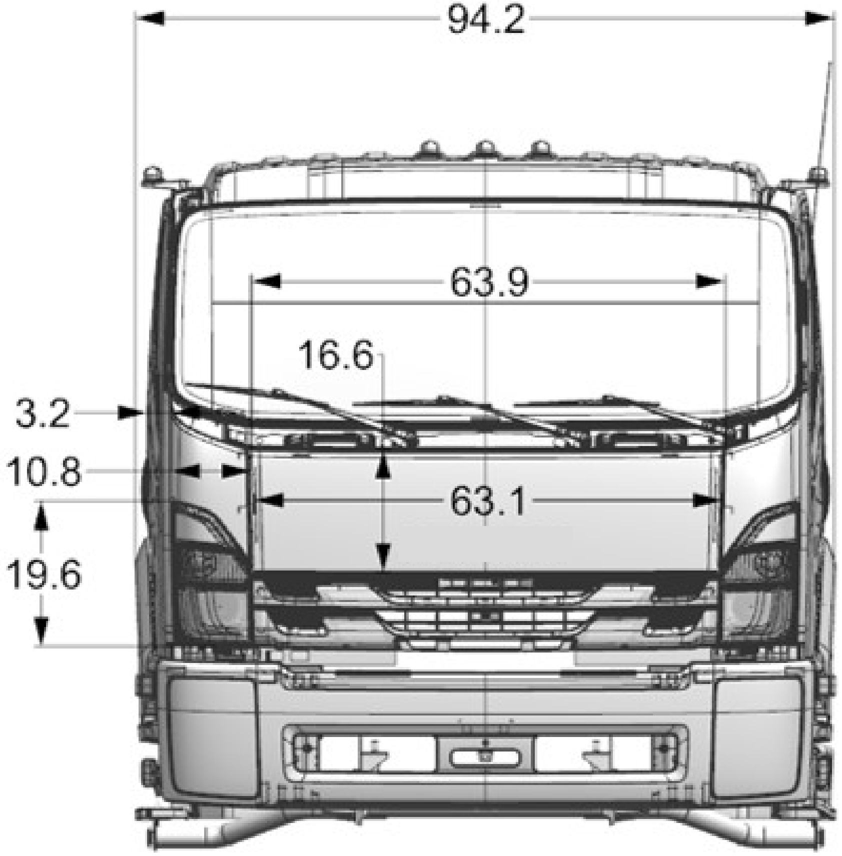

94.2
63.9
16.6
3.2
10.8
63.1
19.6

Figure 2

Dimensions in inches

6500 & 7500 *Single Cab - Rear View*

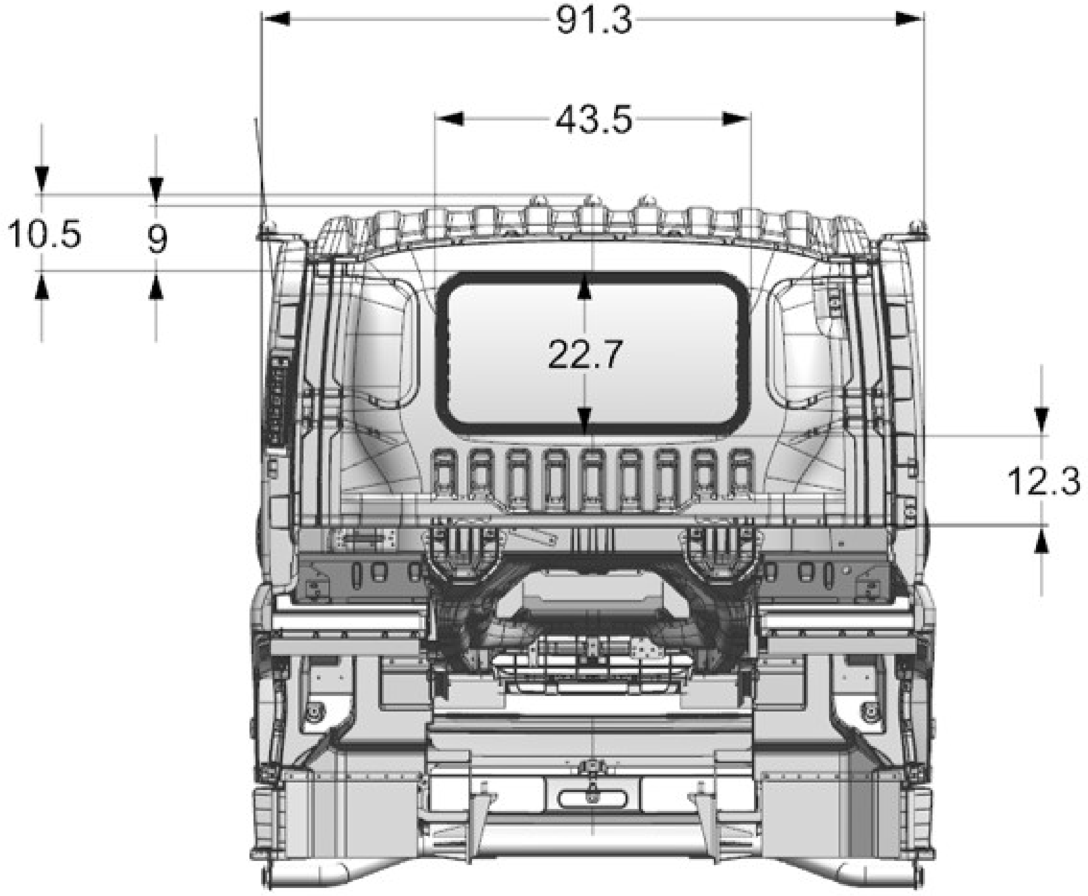
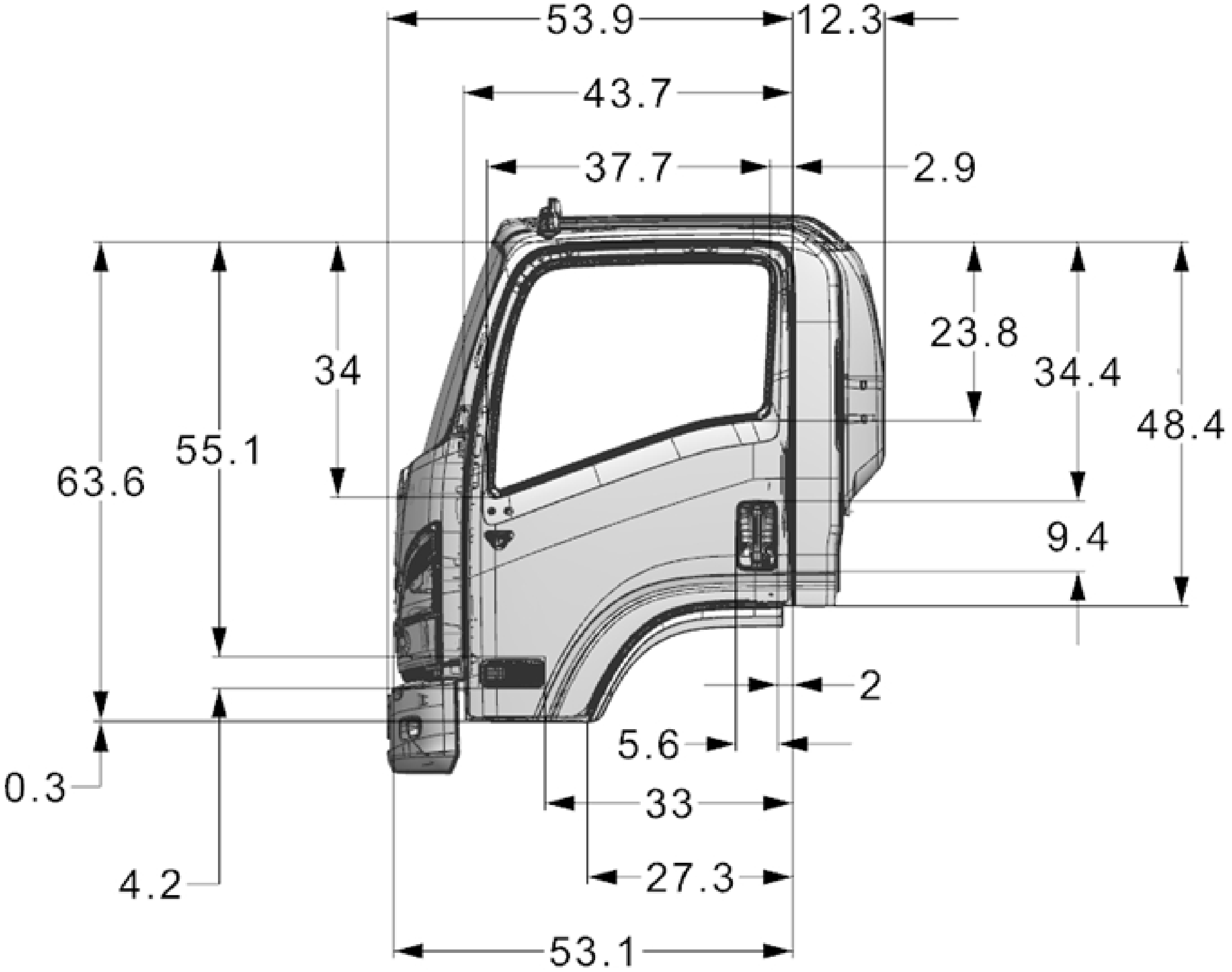

91.3
43.5
10.5
9
22.7
12.3

Figure 3

Dimensions in inches

26MY Diesel Single Cab - Side View


53.9
12.3
43.7
37.7
2.9
34
55.1
63.6
23.8
34.4
48.4
9.4
2
5.6
0.3
33
27.3
4.2
53.1

Dimensions in inches

Figure 1

26MY Diesel Single Cab - Front View

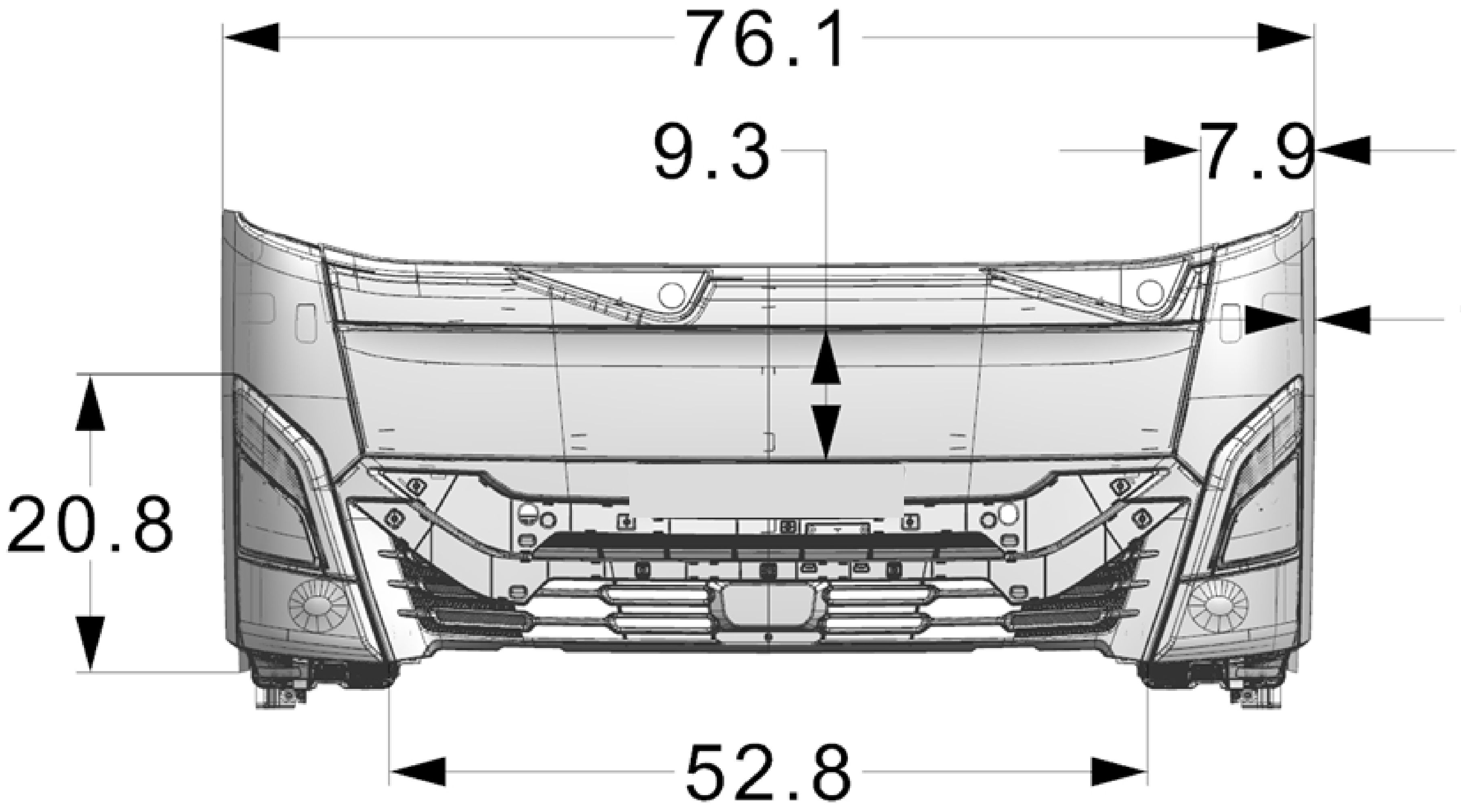

76.1
9.3
7.9
1
20.8
52.8

Figure 2

Dimensions in inches

26MY Diesel Single Cab - Rear View

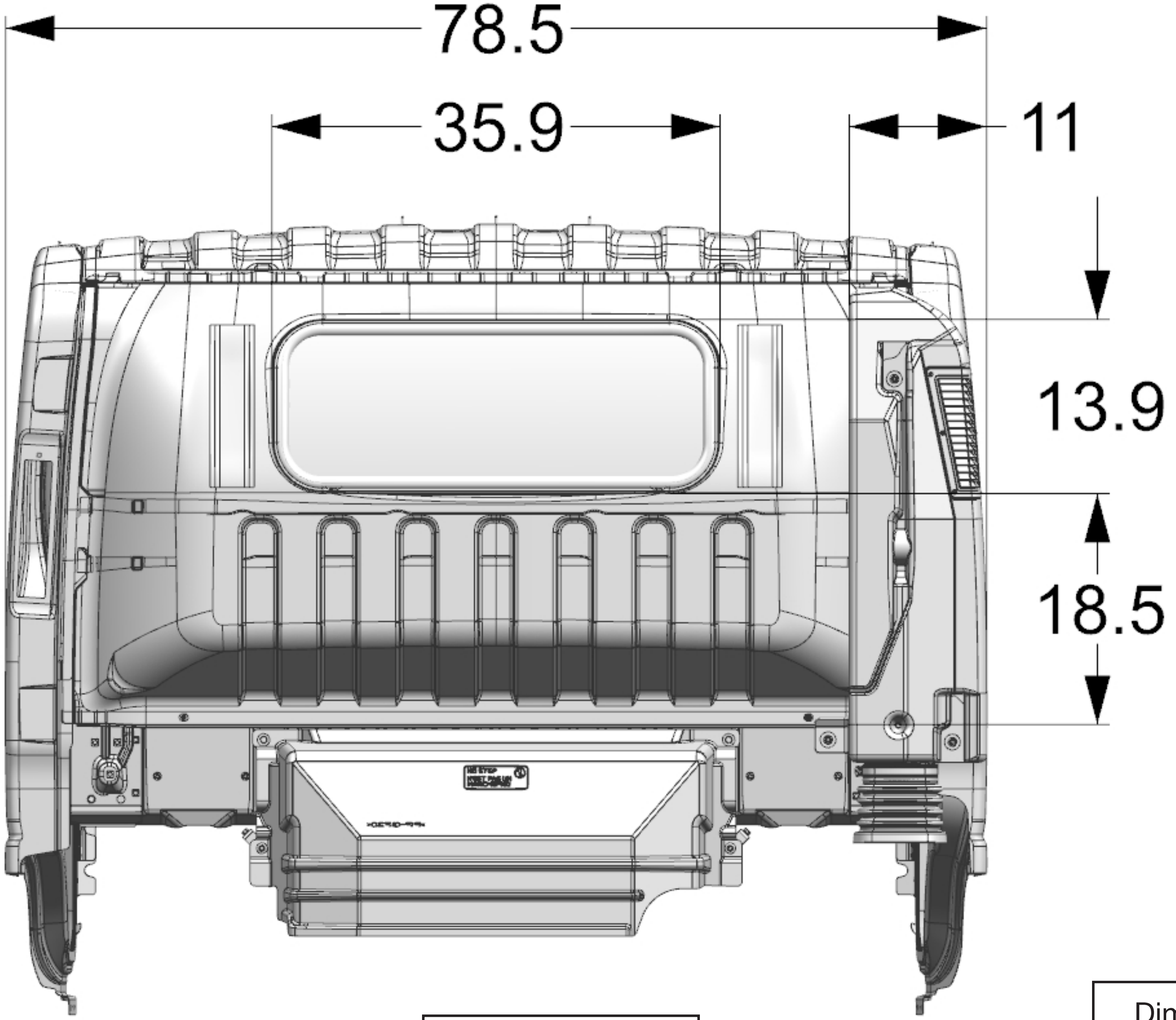


Figure 3

Dimensions in inches

Note:
top of window to top of roof 7.64 inches
top of window to top of cab roof lights 9.64 inches

26MY Diesel Crew Cab - Cab Side View

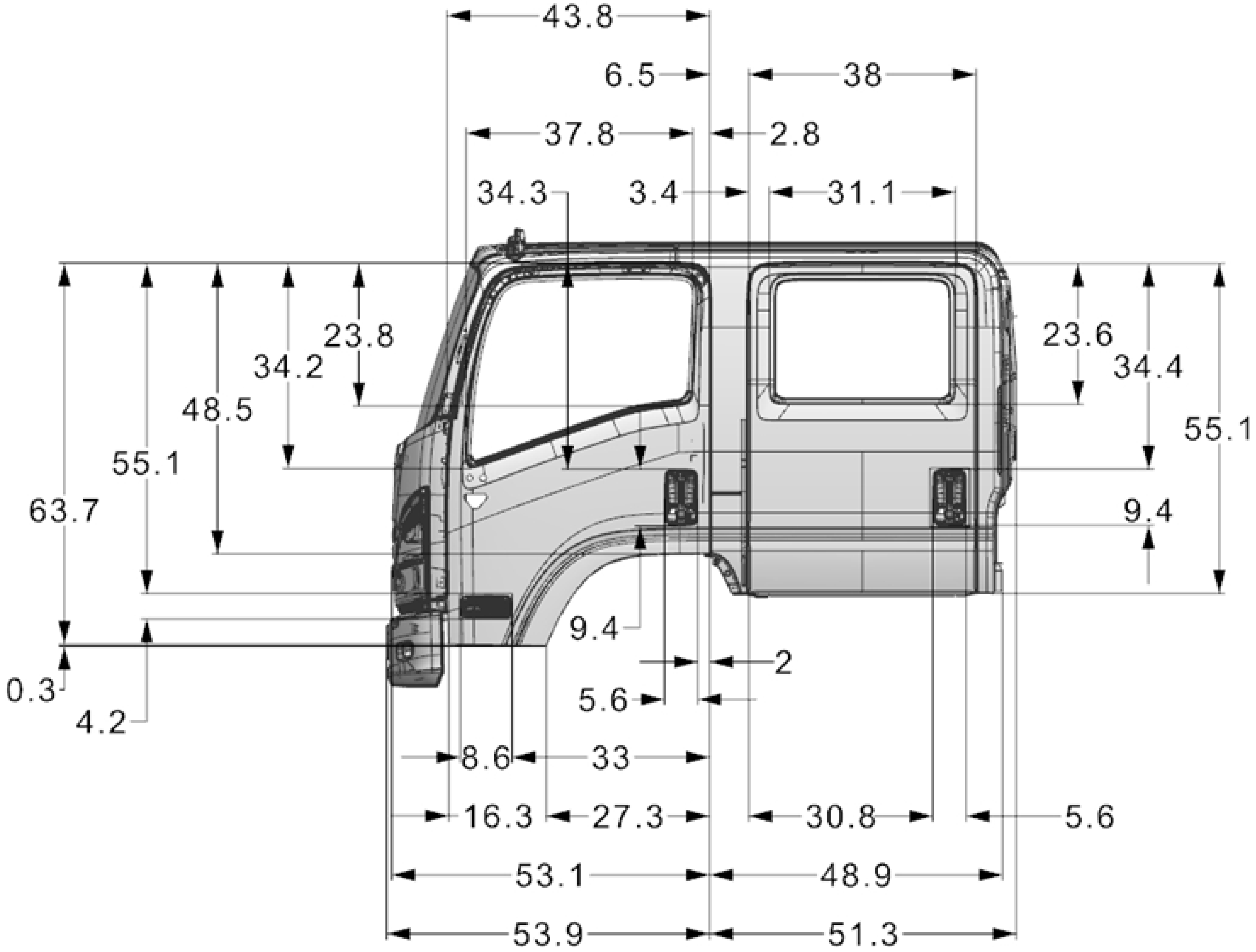

43.8
6.5
38
37.8
2.8
34.3
3.4
31.1
23.8
34.2
48.5
55.1
63.7
0.3
4.2
23.6
34.4
55.1
9.4
9.4
2
5.6
8.6
33
16.3
27.3
30.8
5.6
53.1
48.9
53.9
51.3

Figure 4

Dimensions in inches

26MY Diesel Crew Cab - Front View

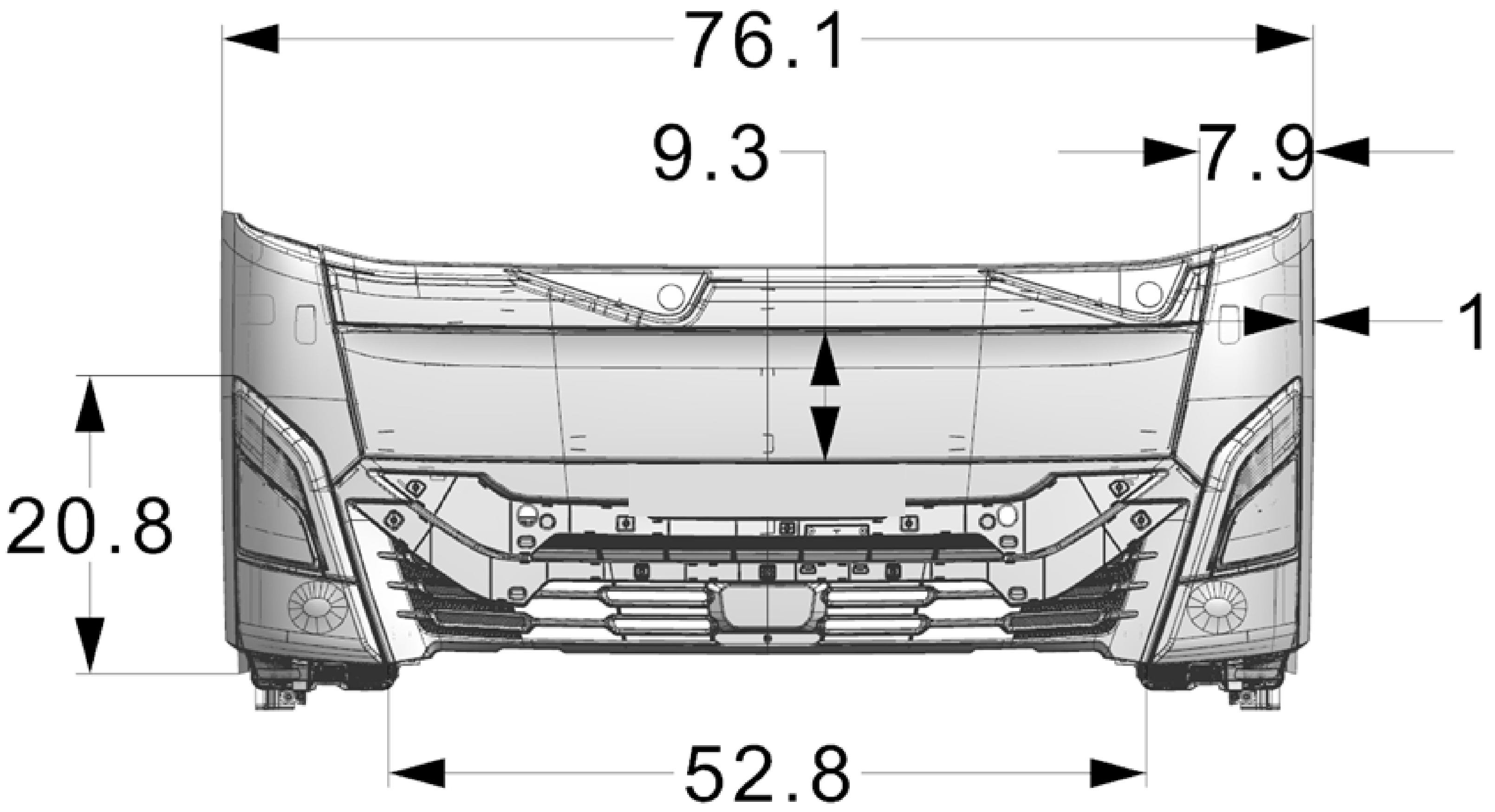
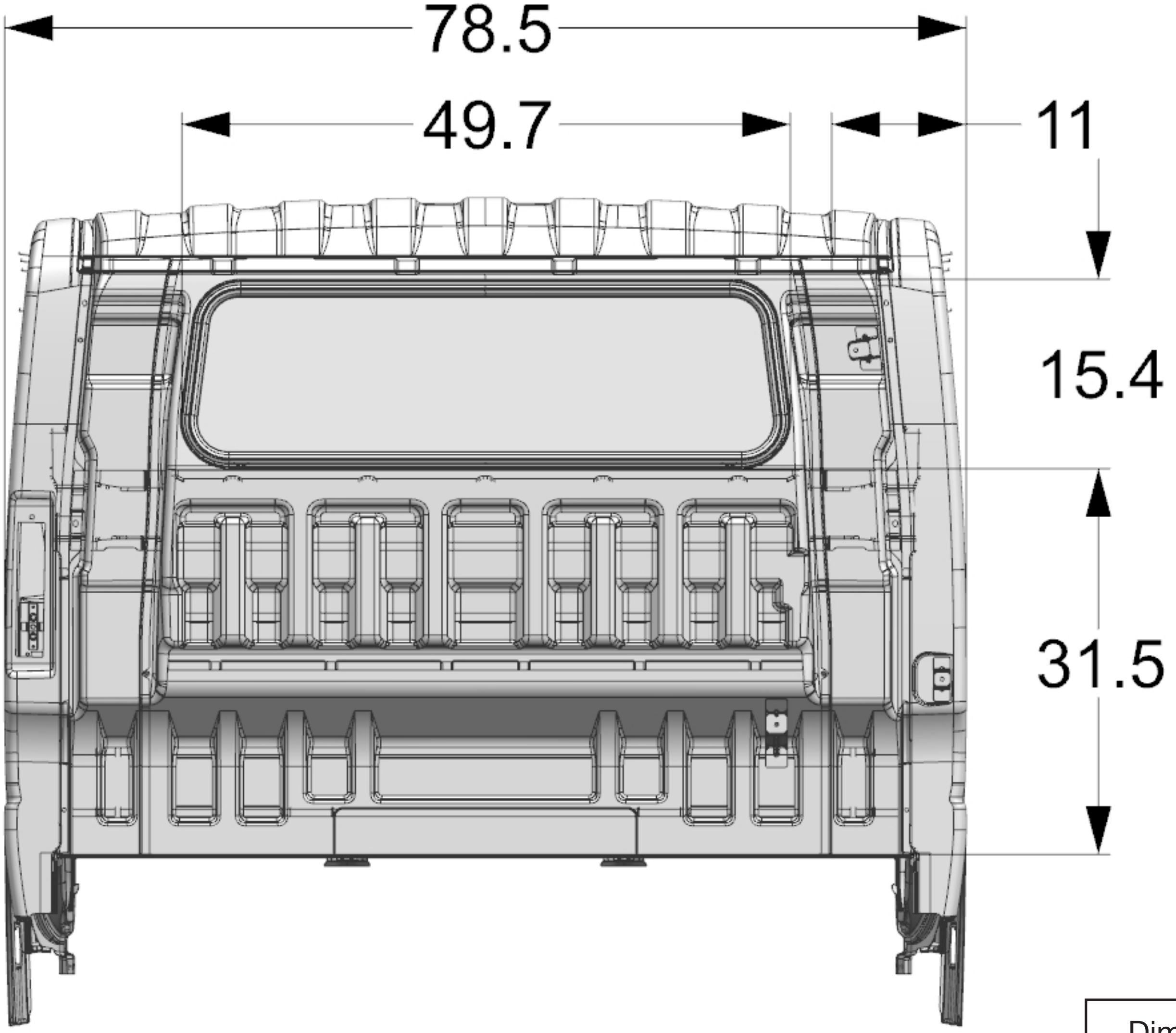

76.1
9.3
7.9
1
20.8
52.8

Figure 5

Dimensions in inches

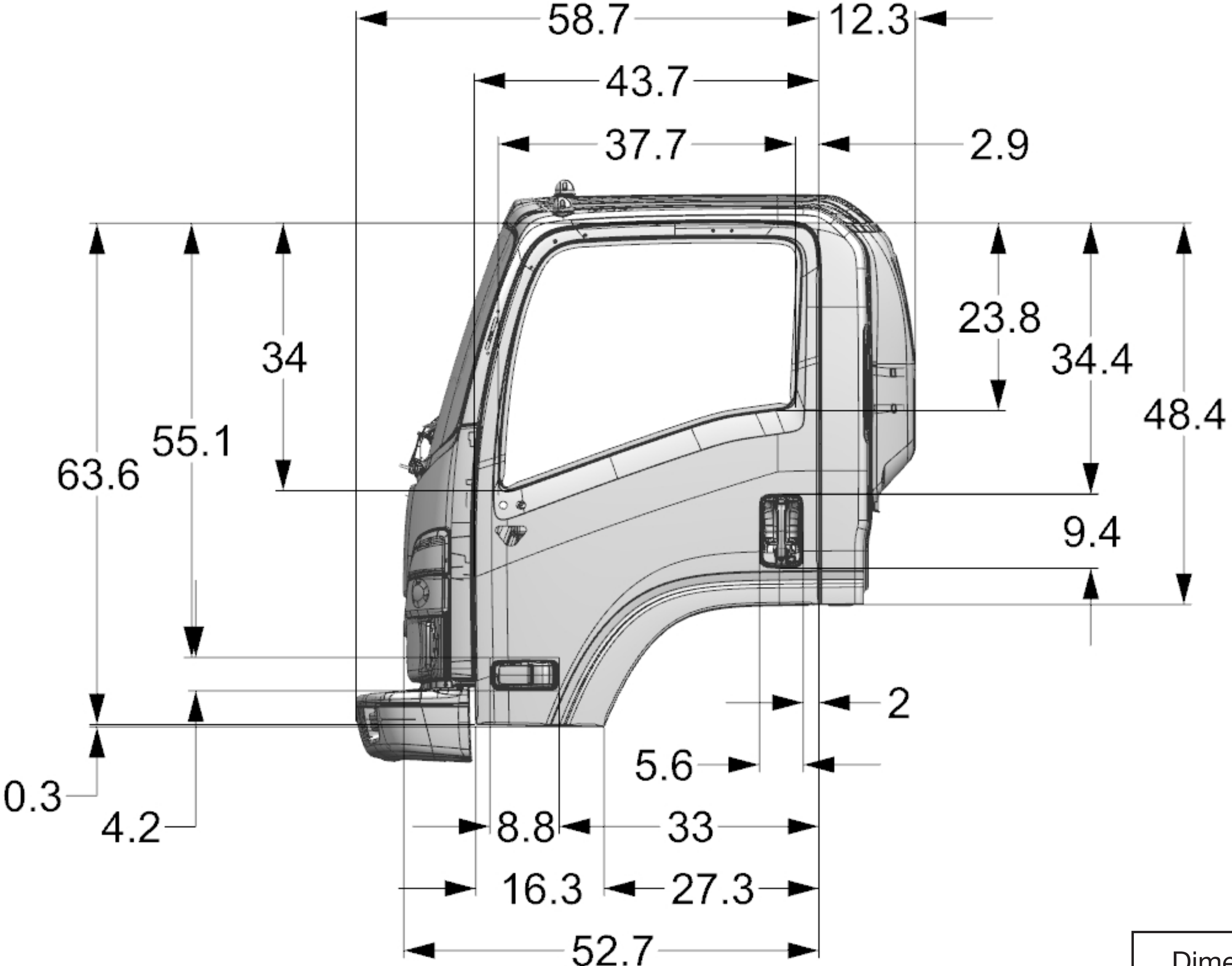
26MY Diesel Crew Cab - Rear View


78.5
49.7
11
15.4
31.5

Dimensions in inches

Figure 6

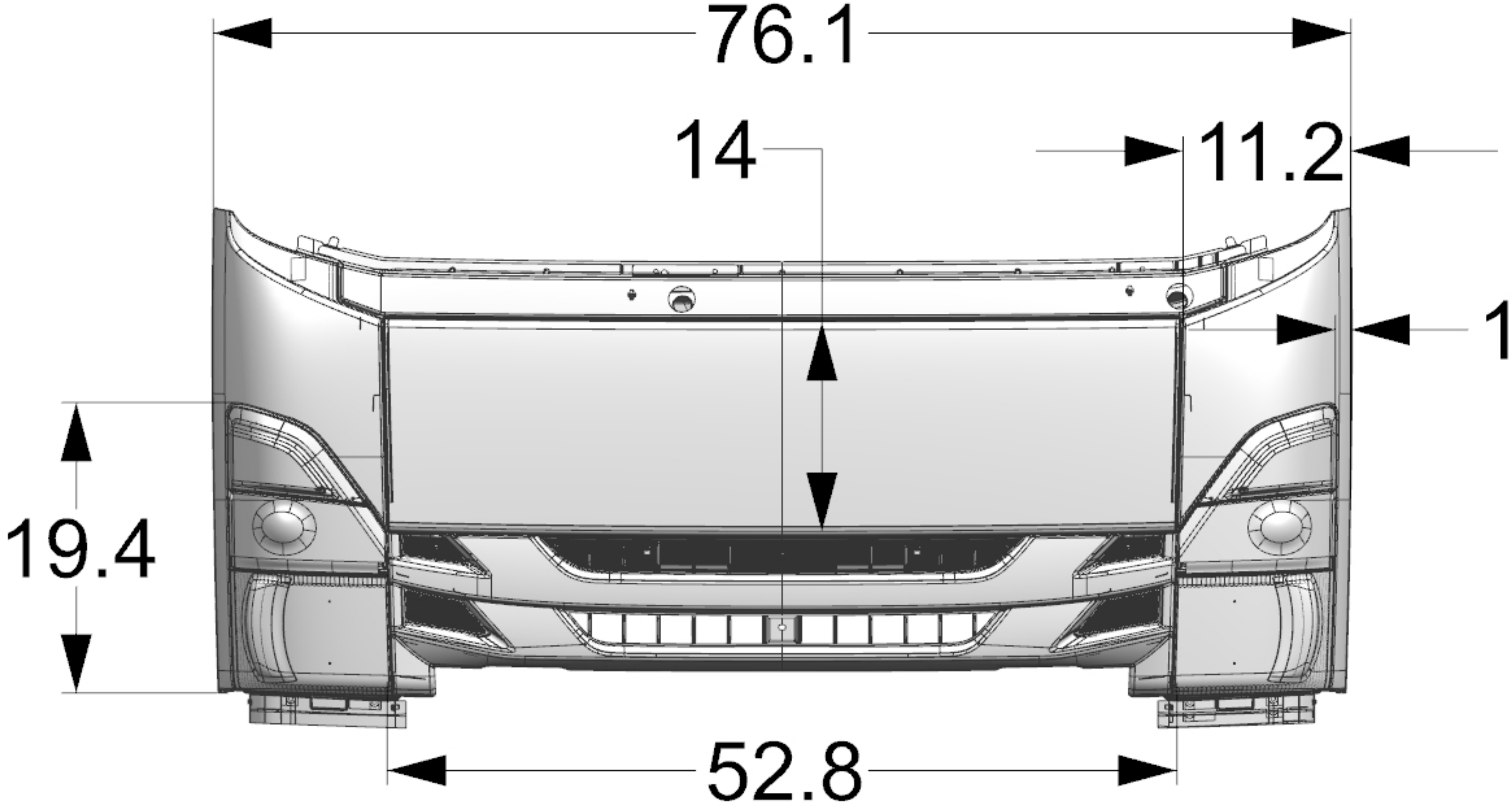
26MY Gas Single Cab - Side View


58.7
12.3
43.7
37.7
2.9
63.6
55.1
34
23.8
34.4
48.4
9.4
2
5.6
0.3
4.2
8.8
33
16.3
27.3
52.7

Dimensions in inches

Figure 7

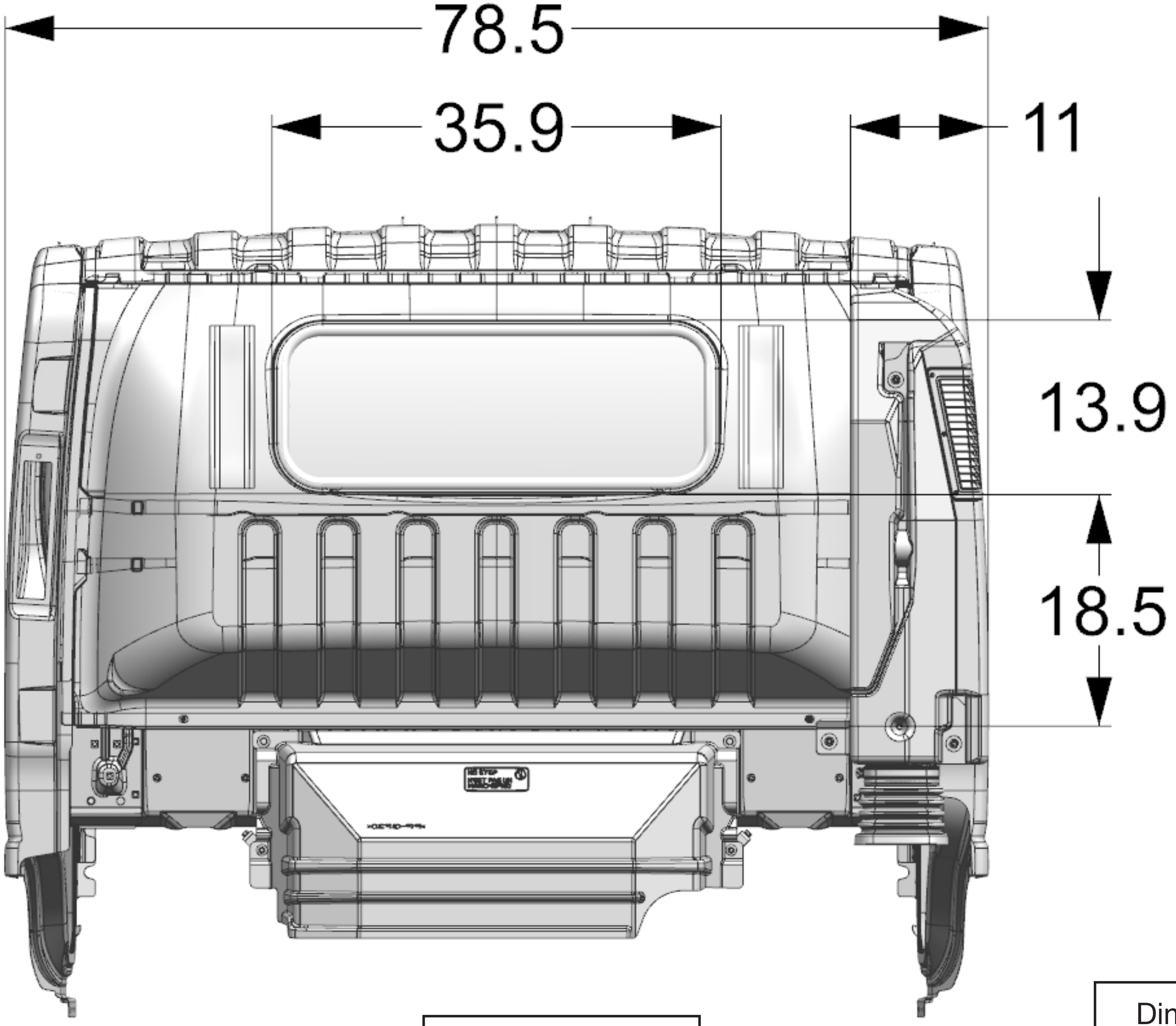
26MY Gas Single Cab - Front View


76.1
14
11.2
1
19.4
52.8

Dimensions in inches

Figure 8

26MY Gas Single Cab - Rear View



Dimensions in inches

Figure 9

Note:
top of window to top of roof 7.64 inches
top of window to top of cab roof lights 9.64 inches

26MY Gas Crew Cab - Cab Side View

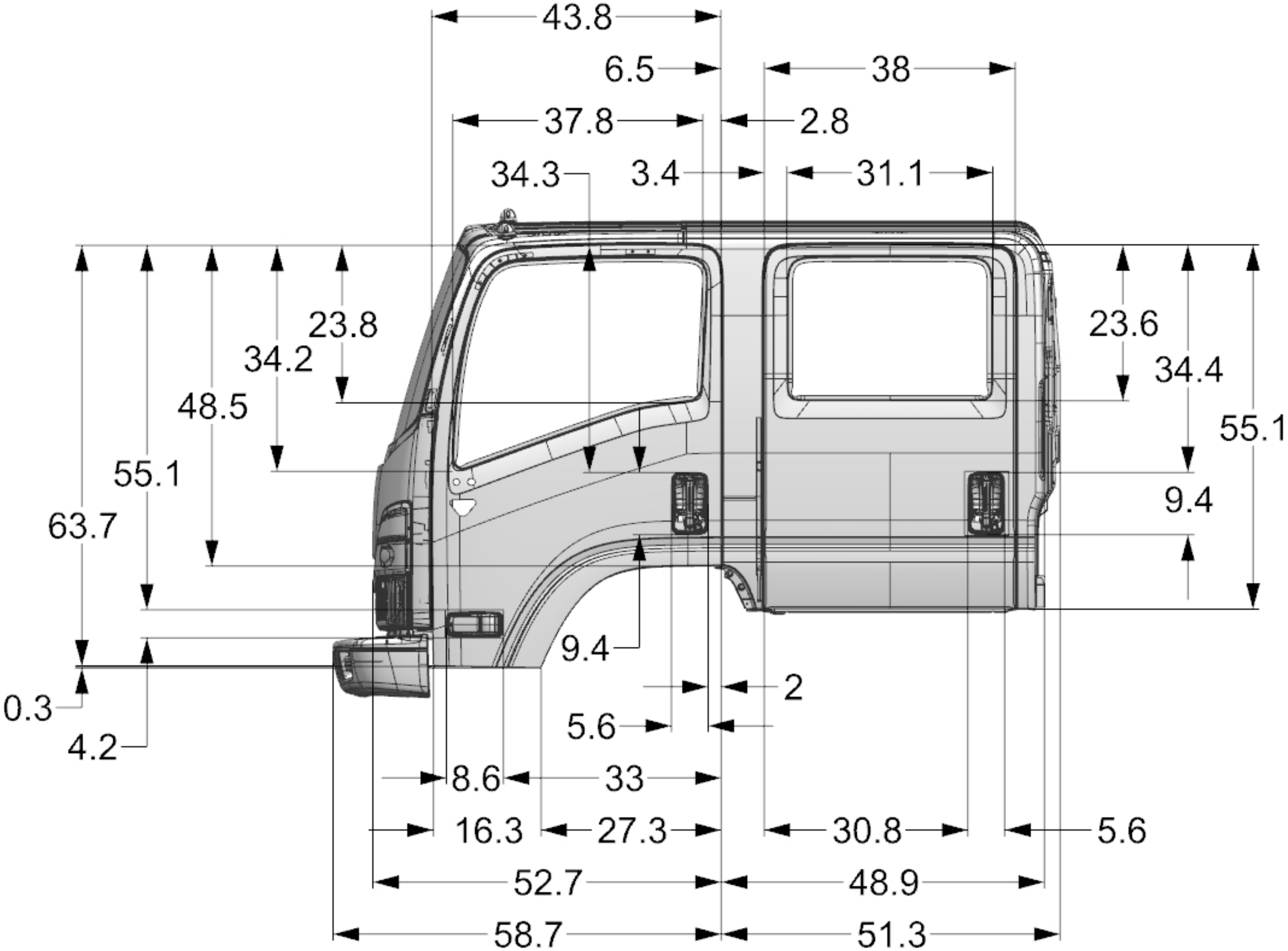

43.8
6.5
38
37.8
2.8
34.3
3.4
31.1
23.8
34.2
48.5
55.1
63.7
23.6
34.4
55.1
9.4
9.4
0.3
4.2
2
5.6
8.6
33
16.3
27.3
30.8
5.6
52.7
48.9
58.7
51.3

Figure 10

Dimensions in inches

26MY Gas Crew Cab - Front View

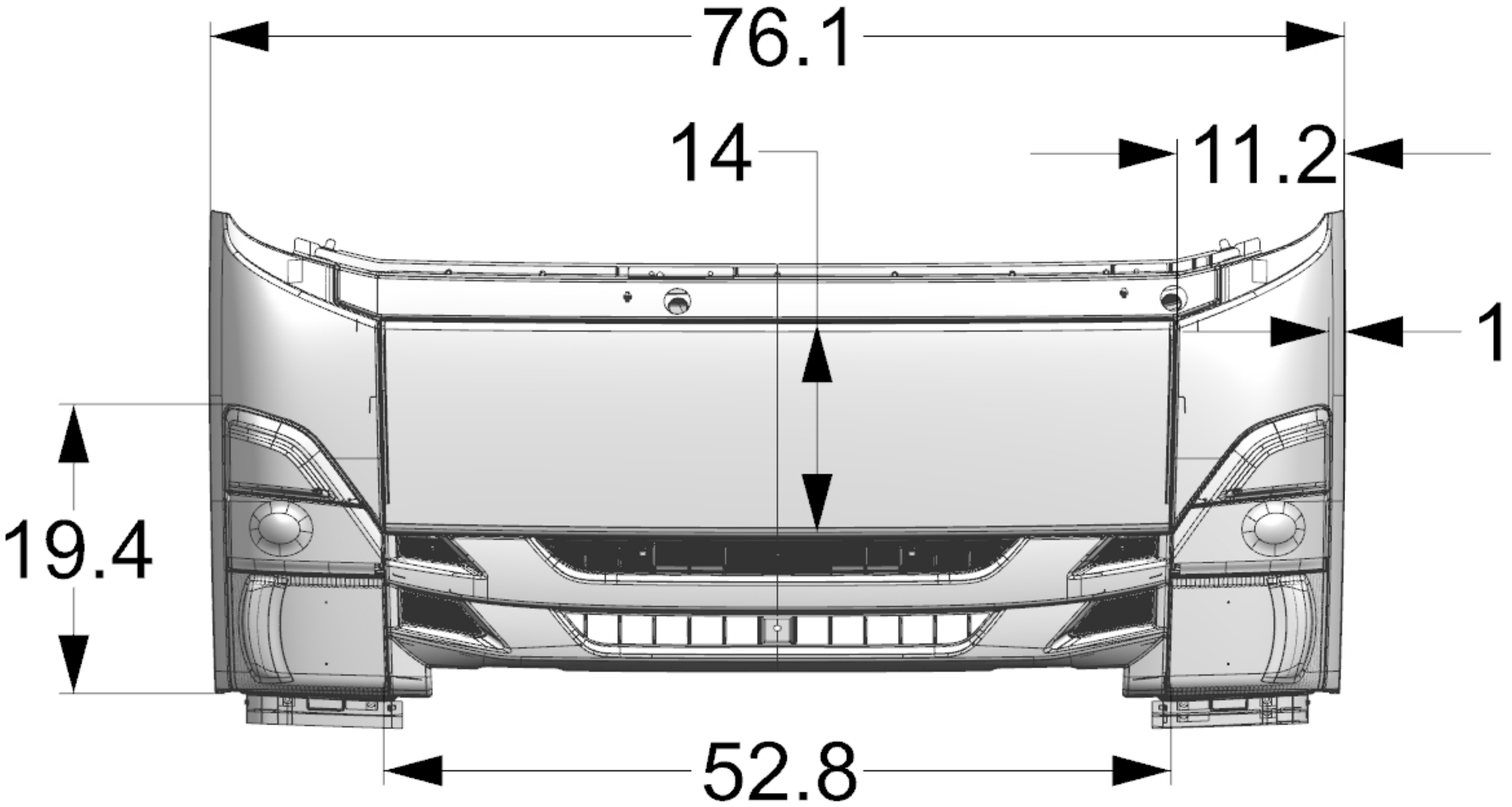
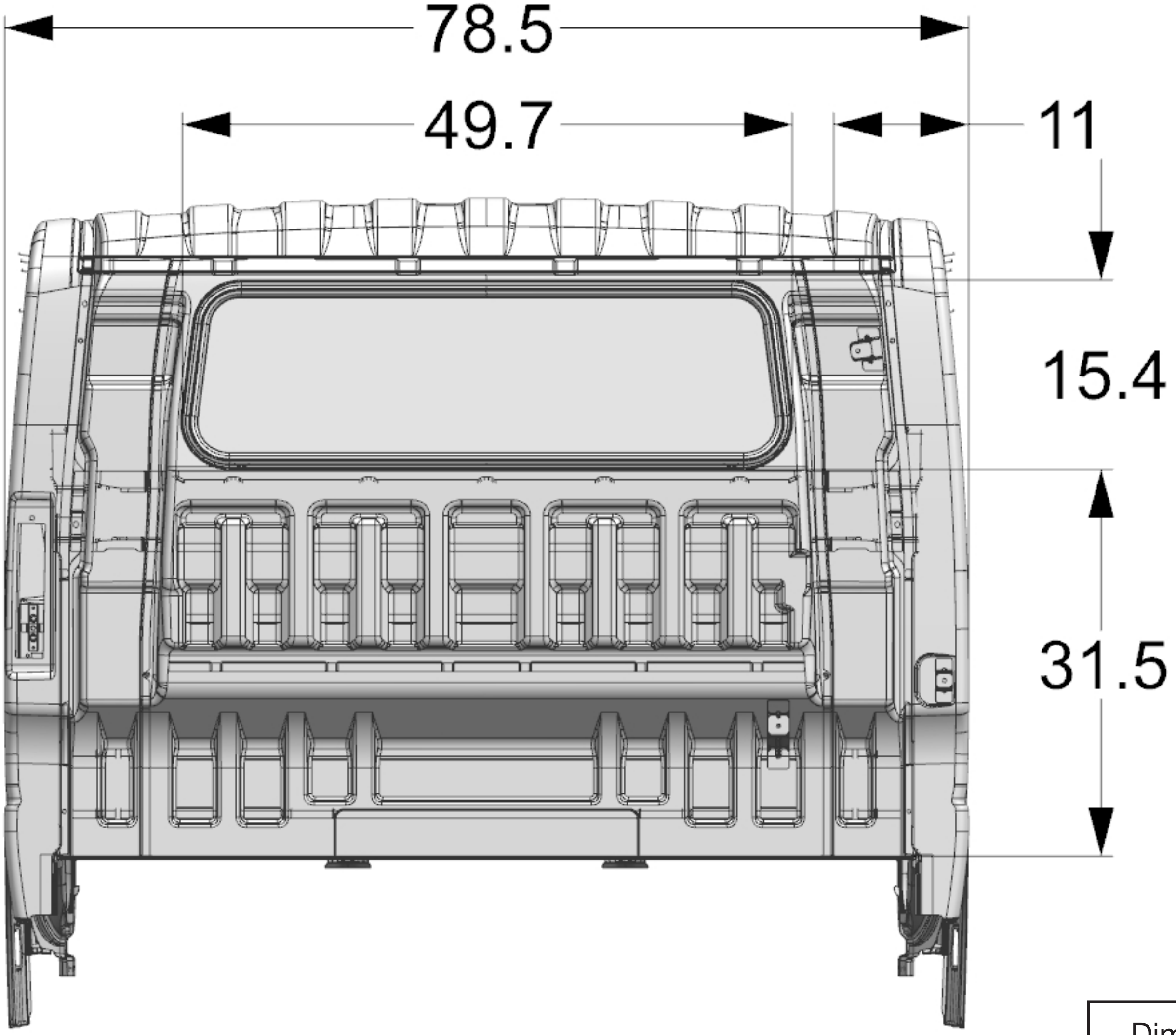

76.1
14
11.2
1
19.4
52.8

Figure 11

Dimensions in inches

26MY Gas Crew Cab - Rear View


78.5
49.7
11
15.4
31.5

Dimensions in inches

Figure 12

Single Cab - Front and Side View (Air Shield on Single Cab only)

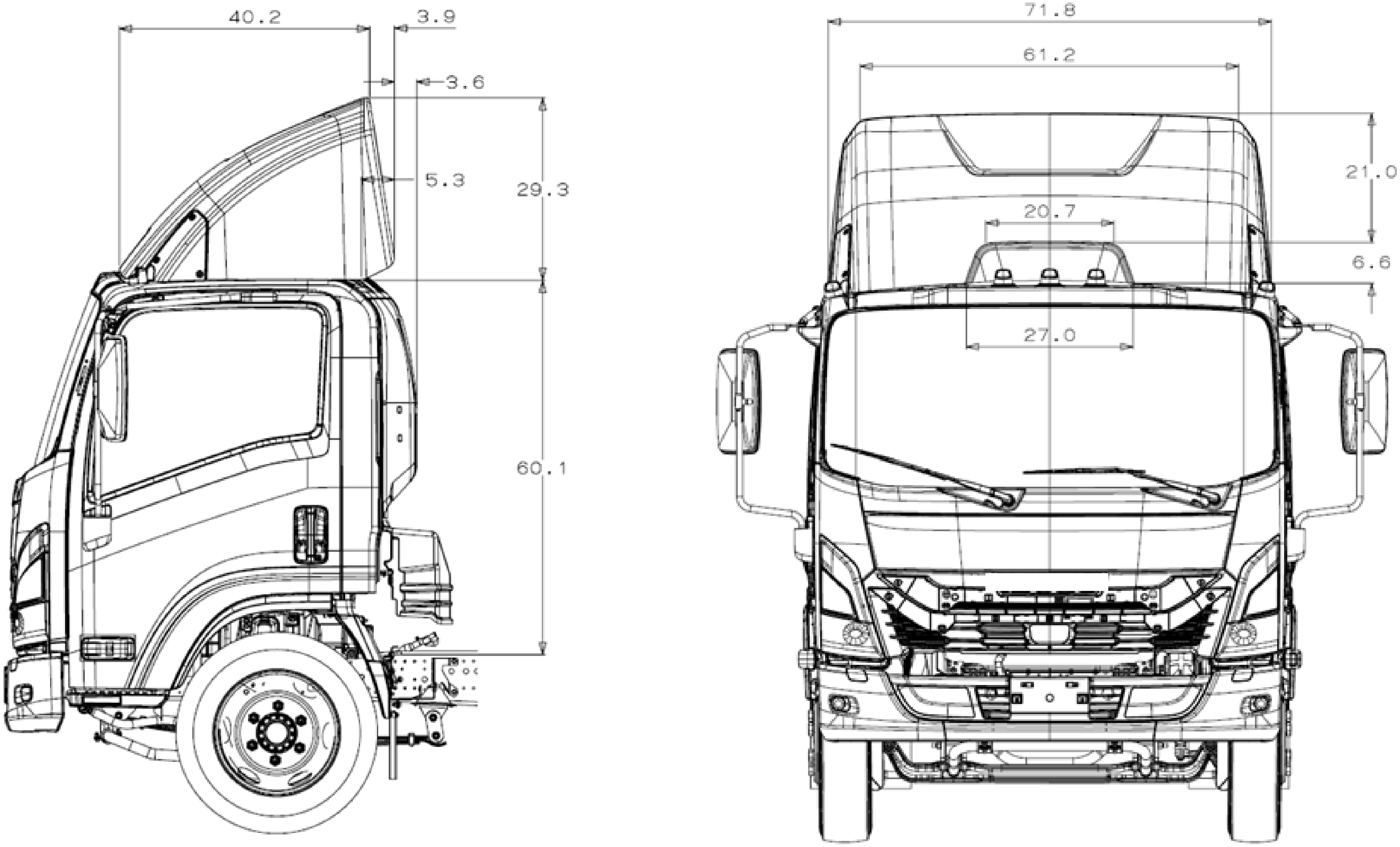

40.2
3.9
3.6
5.3
29.3
60.1
71.8
61.2
21.0
20.7
6.6
27.0

Figure 13

Dimensions in inches

Understanding DPF Regeneration

Understanding SCR (Selective Catalyst Reduction) and Diesel Exhaust Fluid (DEF)

The Selective Catalyst Reduction (SCR) system reduces nitrogen oxide (NOx) emissions emitted from a diesel engine. The SCR system reduces NOx by adding (injecting) Diesel Exhaust Fluid (DEF) into the exhaust system and inducing a reaction converting NOx into water vapor and nitrogen. This reaction takes place without any driver involvement. In addition, as long as the DEF tank is regularly filled with good quality DEF and at a satisfactory level above empty, the driver may never notice the SCR system.

It is the driver's responsibility to keep a good supply of quality DEF in the DEF tank for the proper operation of the SCR system. The SCR system will continuously monitor itself and the NOx reduction performance for any condition that will reduce or stop this emission reduction. The information provided in the remainder of this bulletin will outline the SCR system functions, common characteristics of the SCR system, DEF quality requirements and indicator and warning lights should the SCR system detect an incorrect fluid or if the DEF level in the DEF tank becomes too low.

SCR System Operation and The Driver

The SCR system requires good quality DEF for proper operation. The system is equipped with various sensors to detect the proper fluid is added to the DEF tank. The driver's only responsibility is to add good quality DEF to the DEF tank as necessary. The DEF level gauge on the instrument cluster shows the amount of DEF remaining. In addition the Mutli Information Display (MID) will provide additional notice to encourage the driver to add DEF. In order to keep the SCR system operational and emissions compliant a warning system will activate when the DEF level becomes too low (see DEF Low Level Warning System).

After starting the engine the SCR control module will pressurize the system and based on various sensor inputs begin to reduce NOx emissions. No driver action is necessary for the SCR system to function. After the engine is turned "OFF" the SCR control module will reduce system pressure and recover all DEF in the system piping back to the DEF tank. This action is taken as cold weather protection.

Note: Drivers may notice a buzzing noise from the driver side of the vehicle near the DEF tank a few moments after turning "OFF" the engine. This is a function of the SCR system and should be considered normal.

During cold weather seasons DEF may freeze in the DEF tank. Once the engine is started, engine coolant circulates through the DEF tank to thaw it when frozen and prevent it from freezing while the engine is running. The vehicle can be driven normally when DEF is frozen in the DEF tank

Adding DEF

Under normal conditions DEF can be added simply by removing the DEF tank fill cap and pouring in DEF. A few points to be aware of when transferring DEF from its original container to the DEF tank are:

1. Be sure the outside of the container is clean from any debris
2. If using a funnel or pump to transfer DEF, be sure to use equipment exclusively for DEF made from polyethylene resin or stainless steel.
3. Do not overfill the DEF tank

Take care not to spill DEF. When DEF dries it will leave a crystalline residue. This condition is normal. Wash, with water, or wipe away the residue to prevent it from entering the DEF tank. If DEF is spilled on the body or frame, it may cause the metal to rust, so wipe it off and then rinse it away with water.

Note: For cold weather climates (ambient temperatures below -11°C/12°F)

Chevrolet does not recommend parking the vehicle for long periods with the refill diesel exhaust fluid (DEF) warning light on in cold weather. The DEF low level warning system may not reset when DEF is added. Take the following actions to avoid this condition in cold weather.

1. Refill the DEF as soon as possible after parked vehicle.
2. Turn the engine control switch to the “ON” position from the “LOCK” position.
3. Wait for the warning buzzers and warning lights to turn off.
4. If the buzzer does not stop, return the engine control switch back to the “LOCK” position and add more DEF, and then start over the step (2) above.
5. Turn the engine control switch to the “LOCK” position.Turn the engine control switch to the “ON” position from the “LOCK” position.
6. Wait for the warning buzzers and warning lights to turn off.
7. If the buzzer does not stop, return the control switch back to the “LOCK” position and add more DEF, and then start over the step (2) above.
8. Turn the engine control switch to the “LOCK” position.

DEF Low Level Warning System

To avoid running out of DEF the SCR system will turn on warning and indicator lights and reduce engine power in progressive stages to encourage adding DEF. The following is a summary of the diesel exhaust fluid (DEF) low level warning lights, indicator lights and engine power reductions. Continuing to drive for too long after these lights come on will eventually result in a severe vehicle speed limitation. These warning and indicator lights will go out automatically and engine power will be restored to normal after the SCR system detects that the DEF tank is refilled with DEF.

Stage 1: When the remaining level of DEF becomes excessively low the DEF gauge will change color from green to amber. In addition, warning and indicator lights will come on as shown in the table and engine power will be reduced so the vehicle speed will not exceed 55 MPH (89 km/h).

Stage 2: If driving is continued without adding DEF (approximately 200 miles (320 km)) the DEF gauge, warning and indicator lights will begin blinking. Again, engine power will be reduced so the vehicle speed will not exceed 35 MPH (56 km/h).

Stage 3: If driving is continued until the DEF tank is empty, the DEF gauge will change color from amber to red and the warning and indicator lights will begin to blink faster. Engine power will still be reduced so the vehicle speed will not exceed 35 MPH (56 km/h). The vehicle speed will be limited to 5 MPH (8 km/h) either when the vehicle is stopped after driving further on (approximately 35 miles (56 km)) or when the engine is restarted.

Stage 4: The DEF gauge is red, the indicator light is blinking and the buzzer is beeping continuously indicates the vehicle speed is limited to 5 MPH (8 km/h).

DEF Quality and Storage

Diesel Exhaust Fluid is a urea-based chemical reactant designed specifically for use in SCR systems to reduce NOx emissions. The raw materials used to produce DEF include natural gas, coal or other petroleum products. DEF is prepared by combining high purity urea with deionized water to create a 32.5% solution. DEF and similar urea-based products are widely used today for a variety of agricultural and industrial needs. Chevrolet DEF is API certified and meets ISO22241 specifications for purity and composition, while being:

- Non-toxic and non-polluting
- Non-flammable
- Stable and colorless
- Non-hazardous

DEF should be stored in an indoor place with good ventilation avoiding direct sunlight, if possible. Be sure containers are sealed properly to avoid contamination and evaporation. To maximize shelf life, ideal storage temperature is below 30°C/86°F and above -11°C/12°F to prevent freezing. If frozen DEF can be thawed and used without any concerns.

DEF Safety

Though it should be harmless for physical contact, there may be a rare case to induce inflammation depending on the body constitution, so make sure to take following actions.

- In the event that the fluid does come into contact with your skin, wash it off with water. Although it is rare, a person with sensitive skin may suffer from irritation. If you come into contact with DEF, flush the affected area with soap and/or water. If irritation or redness develops or persists, seek medical attention.
- If it is accidentally swallowed, drink 1- 2 glasses of water or milk and seek immediate medical attention.
- If it does come into contact with the eyes, immediately rinse it off with a large amount of water for at least 15 minutes, and then seek medical attention.

Customer Assistance in locating DEF

DEF is available from all authorized Chevrolet dealers. In addition, the U.S. Department of Energy has created an on-line DEF locator that can be accessed at www.afdc.energy.gov/afdc/locator/def/ . The American Petroleum Institute (API) also maintains a list of API-certified distributors of DEF on their web page at http://www.apidef.org/

Preparation of New Vehicles for Storage Beyond 30-days

In the event new vehicles are to be stored for extended periods beyond thirty (30) days, the following additional maintenance items are suggested:

NOTE: When new vehicles are stored outside, particularly along coastal areas, paint and bright metal deterioration will be more rapid due to prevailing saltwater atmosphere and high humidity. For this reason, it may be necessary to wash each vehicle and wax the chrome and stainless steel metal parts at least once a month.

NOTE: To prevent the possibility of a build-up of mildew, open the doors to air out each vehicle at least once a month depending upon climatic condition. If there is condensation, wipe the condensation dry with a clean cloth and air out the vehicles.

A. “Block out” mechanical clutches by holding the clutch pedal partially depressed (approximately 1/2 way) with wooden blocks or bracing. This will prevent clutch plates from rusting to the flywheel and clutch pressure plate.
B. Remove windshield wiper arms and blades and store in the vehicle.

In addition, the following procedures are to be carried out at thirty (30)-day intervals and instituted after the first thirty (30) days of vehicle storage.

A. Check the battery water level and specific gravity. **If voltage is under 12.20 volts, recharge the battery**.
B. Connect the battery ground cable. Start engine in P range and let idle for at least twenty (20) seconds.
C. Raise the idle up to 2,000 rpm for fifteen (15) minutes. Be sure there is sufficient fuel in tank. Each new vehicle is supplied with approximately 1.5 gallons of fuel. Do not let the tank run dry.
D. Shift the transmission lever to all positions while the engine is running.
E. Move the vehicle for a distance of at least thirty (30) feet to lubricate the wheel bearings.
NOTE: The vehicle should be re-parked so that a different area of the tires is in contact with the ground to reduce the possibility of tire damage.
F. Turn the steering wheel lock-to-lock while the vehicle is moving slowly.
G. Apply and release the service and parking brakes several times (do not apply the parking brake when the vehicle is moving).
H. Stop the engine.
I. After warm-up operation, check under the vehicle to make sure there is no oil or fluid leakage.
J. Disconnect the battery ground cable.
K. Drain the brake air reservoirs (if appropriate) and close the drain cocks.

New Vehicles Stored Beyond One Year

In the event new vehicles are to be stored for extended periods beyond one (1) year, the following additional maintenance is required every twelve (12) months:

A. Replace engine oil, coolant, brake fluid, transmission oil, differential gear oil and all other fluids.
B. Drain and refill diesel exhaust fluid (DEF).
C. Drain and refill fuel (diesel and gasoline).
D. Replace fuel filters (diesel only).

Modes of Regeneration Quick Reference Guide

- **2011-2015MY Chevrolet LCF Equipped with Diesel Particulate Filter (DPF)**

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ISSUE DATE: MARCH 2014	
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N-Series - Understanding DPF Regeneration; Modes of Regeneration Quick Reference Guide

[redacted]

2011 - 2015 Isuzu NPR/NPRHD/NQR/NRR
2012 - 2014 Isuzu NPR

SERVICE INFORMATION

AFFECTED VEHICLES

- 2011-2015MY Isuzu N-Series Equipped with Diesel Particulate Filter (DPF)

This bulletin supersedes bulletin IB07-L-002B. This bulletin is being revised to update Model Years and Service Information. Please discard bulletin IB07-L-002B.

SERVICE INFORMATION

Isuzu has found that many times customers are unfamiliar with the overall operation of the DPF system (including the importance of completing a regeneration), which leads to unnecessary vehicle downtime. Please make sure your sales and service staff is completely familiar with the DPF system functionality and operation so when a new truck is delivered or comes in for service, the dealership team can instruct customers on proper operation which will minimize vehicle downtime.

The quick reference information below is provided to assist dealer personnel in better understanding the DPF Emission System Operation. Additional information regarding DPF Regeneration can be found in the Owner's Manual, Service Manual, the driver side sunvisor label, or on the Emission System Operation video. For your convenience, this video may be downloaded from www.isuzucv.com.

IMPORTANT: DPF cleaning is due every 100,000 miles or 3,000 hours of operation (whichever occurs first). Some applications (such as sweepers, trucks that idle for extended periods, along with frequent stop/go), may require more frequent cleaning. Please see the appropriate owner's manual for specific cleaning instructions.

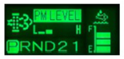
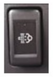
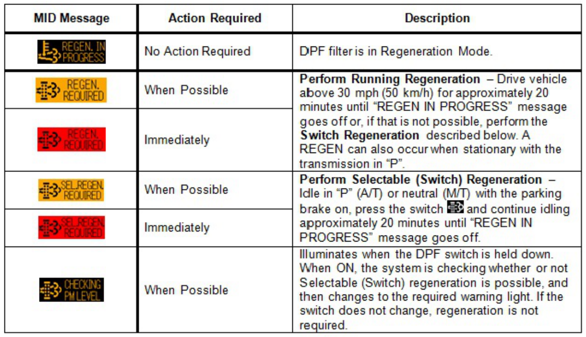
	

Figure 1 - Normal DPF Lamp Notification	Figure 2 - DPF Switch

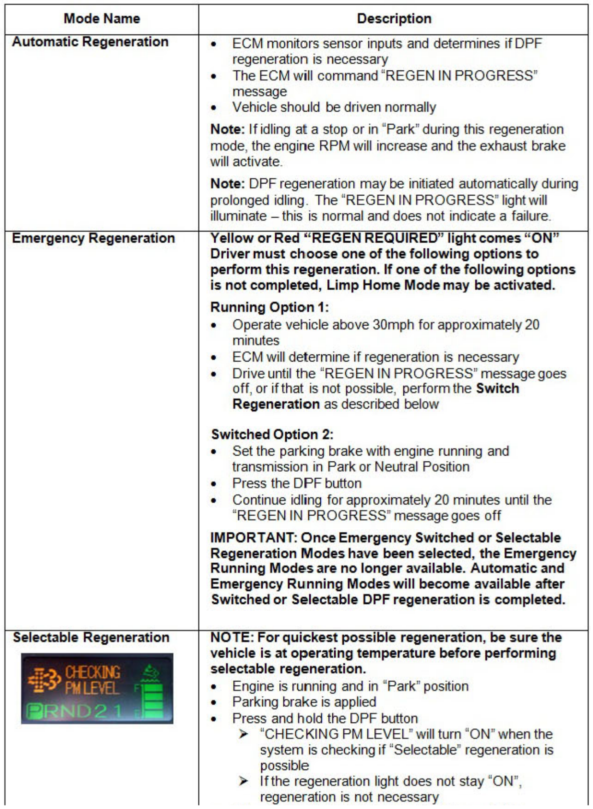
IMPORTANT: Before starting DPF regeneration, ensure that the exhaust area is clear of grass, leaves, or any dry debris that could ignite, as this area will become very hot during regeneration.



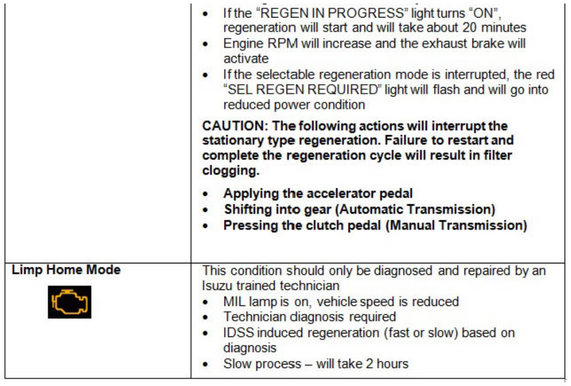
MID Message	Action Required	Description
REGEN. IN PROGRESS	No Action Required	DPF filter is in Regeneration Mode.
REGEN. REQUIRED	When Possible	**Perform Running Regeneration** – Drive vehicle above 30 mph (50 km/h) for approximately 20 minutes until "REGEN IN PROGRESS" message goes off or, if that is not possible, perform the **Switch Regeneration** described below. A REGEN can also occur when stationary with the transmission in "P".
REGEN. REQUIRED	Immediately	
SEL.REGEN. REQUIRED	When Possible	**Perform Selectable (Switch) Regeneration** – Idle in "P" (A/T) or neutral (M/T) with the parking brake on, press the switch and continue idling approximately 20 minutes until "REGEN IN PROGRESS" message goes off.
SEL.REGEN. REQUIRED	Immediately	
CHECKING PM LEVEL	When Possible	Illuminates when the DPF switch is held down. When ON, the system is checking whether or not Selectable (Switch) regeneration is possible, and then changes to the required warning light. If the switch does not change, regeneration is not required.

IMPORTANT: Before starting DPF regeneration, ensure that the exhaust area is clear of grass, leaves, or any dry debris that could ignite, as this area will become very hot during regeneration.

REGENERATION MODES



Mode Name	Description
Automatic Regeneration	- ECM monitors sensor inputs and determines if DPF regeneration is necessary - The ECM will command "REGEN IN PROGRESS" message - Vehicle should be driven normally **Note:** If idling at a stop or in "Park" during this regeneration mode, the engine RPM will increase and the exhaust brake will activate. **Note:** DPF regeneration may be initiated automatically during prolonged idling. The "REGEN IN PROGRESS" light will illuminate – this is normal and does not indicate a failure.
Emergency Regeneration	**Yellow or Red "REGEN REQUIRED" light comes "ON" Driver must choose one of the following options to perform this regeneration. If one of the following options is not completed, Limp Home Mode may be activated.** **Running Option 1:** - Operate vehicle above 30mph for approximately 20 minutes - ECM will determine if regeneration is necessary - Drive until the "REGEN IN PROGRESS" message goes off, or if that is not possible, perform the **Switch Regeneration** as described below **Switched Option 2:** - Set the parking brake with engine running and transmission in Park or Neutral Position - Press the DPF button - Continue idling for approximately 20 minutes until the "REGEN IN PROGRESS" message goes off **IMPORTANT: Once Emergency Switched or Selectable Regeneration Modes have been selected, the Emergency Running Modes are no longer available. Automatic and Emergency Running Modes will become available after Switched or Selectable DPF regeneration is completed.**
Selectable Regeneration	**NOTE: For quickest possible regeneration, be sure the vehicle is at operating temperature before performing selectable regeneration.** - Engine is running and in "Park" position - Parking brake is applied - Press and hold the DPF button ➢ "CHECKING PM LEVEL" will turn "ON" when the system is checking if "Selectable" regeneration is possible ➢ If the regeneration light does not stay "ON", regeneration is not necessary



	• If the "REGEN IN PROGRESS" light turns "ON", regeneration will start and will take about 20 minutes • Engine RPM will increase and the exhaust brake will activate • If the selectable regeneration mode is interrupted, the red "SEL REGEN REQUIRED" light will flash and will go into reduced power condition **CAUTION: The following actions will interrupt the stationary type regeneration. Failure to restart and complete the regeneration cycle will result in filter clogging.** • **Applying the accelerator pedal** • **Shifting into gear (Automatic Transmission)** • **Pressing the clutch pedal (Manual Transmission)**
Limp Home Mode	This condition should only be diagnosed and repaired by an Isuzu trained technician • MIL lamp is on, vehicle speed is reduced • Technician diagnosis required • IDSS induced regeneration (fast or slow) based on diagnosis • Slow process – will take 2 hours

IMPORTANT: If the truck continues be operated without regenerating you will notice:

- ***Engine reduced power condition with the red "REGEN REQUIRED" light***
- ***Illuminated check engine light***
- ***You must take vehicle to dealer for service***

Limited Slip Differential Fluid

Should it become necessary to add fluid to the rear axle of a chassis equipped with a limited slip differential please consult the Owners Manual for the appropriate selection of lubricants to be used.

	Axle Housing Stamp	
Ratio	Stand Axle	LSD Axle
4.300	SO	HO
4.555	C9	D9
4.777	S9	H9
5.125	C8	D8
5.375	S8	H8
5.571	A7	B7
5.857	C7	D7